

STN search for 10665009

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NEWS	4	AUG 02	IFIPAT/IFIUDB/IFICDB reloaded with new search and display fields
NEWS	5	AUG 02	Caplus and CA patent records enhanced with European and Japan Patent Office Classifications
NEWS	6	AUG 02	The Analysis Edition of STN Express with Discover! (Version 7.01 for Windows) now available
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NEWS	8	AUG 27	BIOTECHABS/BIOTECHDS: Two new display fields added for legal status data from INPADOC
NEWS	9	SEP 01	INPADOC: New family current-awareness alert (SDI) available
NEWS	10	SEP 01	New pricing for the Save Answers for SciFinder Wizard within STN Express with Discover!
NEWS	11	SEP 01	New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
NEWS	12	SEP 14	STN Patent Forum to be held October 13, 2004, in Iselin, NJ
NEWS	13	SEP 27	STANDARDS will no longer be available on STN
NEWS	14	SEP 27	SWETSCAN will no longer be available on STN
NEWS EXPRESS			JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS INTER			General Internet Information
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NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
NEWS WWW			CAS World Wide Web Site (general information)

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 14:06:08 ON 18 OCT 2004

=> file reg

Page 1by Examiner Cynthia Hamilton

STN search for 10665009

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 14:06:12 ON 18 OCT 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 17 OCT 2004 HIGHEST RN 764629-70-1  
DICTIONARY FILE UPDATES: 17 OCT 2004 HIGHEST RN 764629-70-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=> s hydrogenated and bisphenol a and epoxy
      1878 HYDROGENATED
      8951 BISPHENOL
      3946916 A
      8143 BISPHENOL A
          (BISPHENOL(W)A)
      135745 EPOXY
L1      3 HYDROGENATED AND BISPHENOL A AND EPOXY
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=> d

```
L1 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN 729609-39-6 REGISTRY
CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-
    ylmethyl ester, polymer with hexahydro-1,3-isobenzofurandione,
    hexahydro-5-methyl-1,3-isobenzofurandione and 2,2'-[(1-
    methylethylidene)bis(4,1-cyclohexanediyloxymethylene)]bis[oxirane] (9CI)
    (CA INDEX NAME)
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OTHER NAMES:

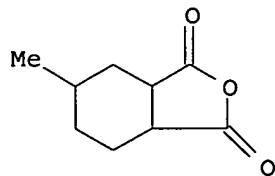
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CN 3,4-Epoxy cyclohexylmethyl 3',4'-epoxycyclohexanecarboxylate-
    hexahydrophthalic anhydride-hydrogenated bisphenol A diglycidyl
    ether-4-methylhexahydrophthalic anhydride copolymer
MF (C21 H36 O4 . C14 H20 O4 . C9 H12 O3 . C8 H10 O3)x
CI PMS
PCT Epoxy resin, Polyester, Polyester formed, Polyether
SR CA
LC STN Files: CA, CAPLUS
DT.CA Caplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); USES (Uses)
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CM 1

CRN 19438-60-9

STN search for 10665009

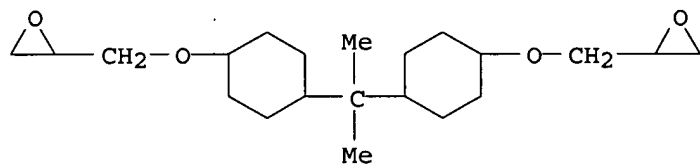
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CRN 13410-58-7

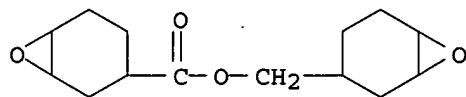
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CM 3

CRN 2386-87-0

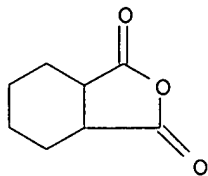
CMF C14 H20 O4



CM 4

CRN 85-42-7

CMF C8 H10 O3



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d 2-3.

'2-3.' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

STN search for 10665009

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN  
SAM - Index Name, MF, and structure - no RN  
FIDE - All substance data, except sequence data  
IDE - FIDE, but only 50 names  
SQIDE - IDE, plus sequence data  
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used  
SQD - Protein sequence data, includes RN  
SQD3 - Same as SQD, but 3-letter amino acid codes are used  
SQN - Protein sequence name information, includes RN  
  
CALC - Table of calculated properties  
EPROP - Table of experimental properties  
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract  
APPS -- Application and Priority Information  
BIB -- CA Accession Number, plus Bibliographic Data  
CAN -- CA Accession Number  
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)  
IND -- Index Data  
IPC -- International Patent Classification  
PATS -- PI, SO  
STD -- BIB, IPC, and NCL  
  
IABS -- ABS, indented, with text labels  
IBIB -- BIB, indented, with text labels  
ISTD -- STD format, indented  
  
OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels  
  
SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.  
HELP FORMATS -- To see detailed descriptions of the predefined formats.  
ENTER DISPLAY FORMAT (IDE):end

=> d 2-3

STN search for 10665009

L1 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN

RN 26283-70-5 REGISTRY

CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediyloxymethylene)]bis-, homopolymer (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Propane, 2,2-bis[4-(2,3-epoxypropoxy)cyclohexyl]-, polymers (8CI)

OTHER NAMES:

CN 2,2-Bis(4-hydroxycyclohexyl)propane diglycidyl ether polymer

CN Adeka EP 4080

CN Adeka EP 4080E

CN Adeka EP 4080S

CN Adeka Resin EP 4080

CN Denacol EX 252

CN DRH 151

CN DRH 151.1

CN EP 4080

CN Epiclon EXA 7015

CN Epikote YL 6571

CN Epikote YL 6663

CN Epikote YX 8000

CN Epikote YX 8034

CN Epo Tohto ST 1000

CN Epo Tohto ST 3000

CN Epolite 4000

CN Eponex 1510

CN Eponex DRH 1510

CN EXA 7015

CN HBE 100

CN Hydrogenated bisphenol A diglycidyl ether homopolymer

CN Hydrogenated bisphenol diglycidyl ether polymer

CN Isopropylidene[4,4'-bis(2,3-epoxypropoxy)cyclohexane] polymer

CN Jeffco 1337

CN Poly[2,2-bis[4-(2,3-epoxypropoxy)cyclohexyl]propane]

CN Rikaresin HBE

CN Rikaresin HBE 100

CN SR-HBA

CN ST 1000

CN Sun Tohto ST 1000

CN Sun Tohto ST 3000

CN YX 8000

DR 98982-66-2, 65862-95-5, 83652-71-5, 87501-09-5, 117630-66-7, 350580-76-6

MF (C21 H36 O4)x

CI PMS, COM

PCT Epoxy resin, Polyether

LC STN Files: CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, PROMT, TOXCENTER, USPAT2, USPATFULL

DT.CA Caplus document type: Conference; Journal; Patent; Report

RL.P Roles from patents: PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: PROC (Process); PRP (Properties); USES (Uses)

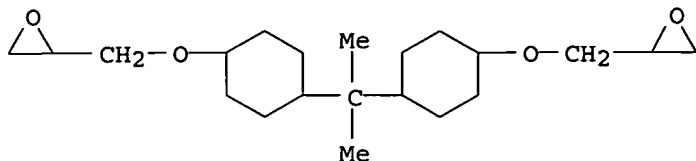
RLD.NP Roles for non-specific derivatives from non-patents: PREP (Preparation)

CM 1

CRN 13410-58-7

CMF C21 H36 O4

STN search for 10665009



201 REFERENCES IN FILE CA (1907 TO DATE)  
48 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
201 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 13410-58-7 REGISTRY  
CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN **Propane, 2,2-bis[4-(2,3-epoxypropoxy)cyclohexyl]- (7CI, 8CI)**

OTHER NAMES:

CN 2,2-Bis(4'-glycidoxycyclohexyl)propane  
CN 2,2-Bis(4-glycidylloxycyclohexyl)propane  
CN 2,2-Bis(4-hydroxycyclohexyl)propane diglycidyl ether  
CN **2,2-Bis[4-(2,3-epoxypropoxy)cyclohexyl]propane**  
CN **Hydrogenated bisphenol A diglycidyl ether**

FS 3D CONCORD

DR 255846-37-8

MF C21 H36 O4

CI COM

LC STN Files: CA, CAOLD, CAPLUS, CASREACT, CHEMLIST, IFICDB, IFIPAT, IFIUDB, SPECINFO, TOXCENTER, USPAT2, USPATFULL

Other Sources: EINECS\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

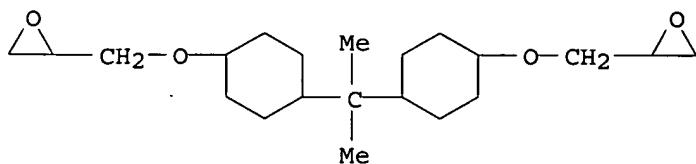
DT.CA Caplus document type: Conference; Journal; Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)

RLD.NP Roles for non-specific derivatives from non-patents: USES (Uses)



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

120 REFERENCES IN FILE CA (1907 TO DATE)  
34 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
120 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

STN search for 10665009

=> s 13410-58-7/crn

L2 311 13410-58-7/CRN

=> s l2 and epichlorhydrin

33 EPICHLORHYDRIN

L3 0 L2 AND EPICHLORHYDRIN

=> s l2 and epichlorohydrin

3779 EPICHLOROHYDRIN

L4 2 L2 AND EPICHLOROHYDRIN

=> d 1-2

L4 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN

RN 658065-82-8 REGISTRY

CN 2-Propenoic acid, 2-methyl-, polymer with (chloromethyl)oxirane, ethenylbenzene, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate, 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis[oxirane], 4,4'-(1-methylethylidene)bis[phenol], 2-methylpropyl 2-methyl-2-propenoate, 3-(triethoxysilyl)-1-propanamine and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Bisphenol A-epichlorohydrin-ethyl acrylate-2-ethylhexyl acrylate-hydrogenated bisphenol A diglycidyl ether-KBE 903-KBM 503-methacrylic acid-styrene copolymer

MF (C21 H36 O4 . C15 H16 O2 . C11 H20 O2 . C10 H20 O5 Si . C9 H23 N O3 Si . C8 H14 O2 . C8 H8 . C5 H8 O2 . C4 H6 O2 . C3 H5 Cl O)x

CI PMS

PCT Epoxy resin, Polyacrylic, Polyether, Polyother, Polystyrene

SR CA

LC STN Files: CA, CAPLUS

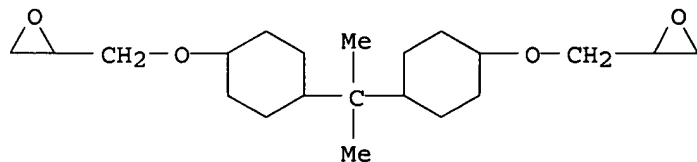
DT.CA CAplus document type: Patent

RL.P Roles from patents: PREP (Preparation); USES (Uses)

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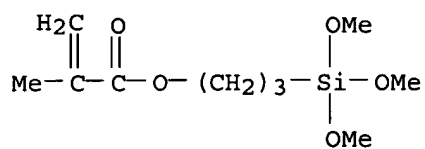
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CRN 2530-85-0

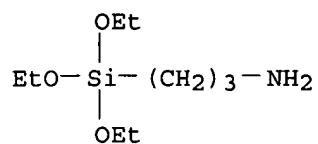
CMF C10 H20 O5 Si



CM 3

CRN 919-30-2

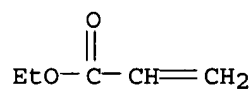
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CM 4

CRN 140-88-5

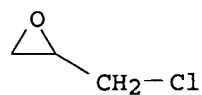
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CM 5

CRN 106-89-8

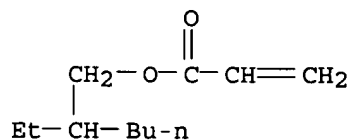
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CM 6

CRN 103-11-7

CMF C11 H20 O2



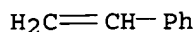


STN search for 10665009

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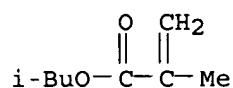
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CM 8

CRN 97-86-9

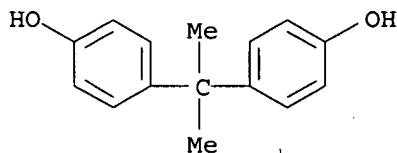
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CM 9

CRN 80-05-7

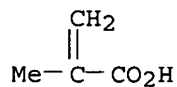
CMF C15 H16 O2



CM 10

CRN 79-41-4

CMF C4 H6 O2



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN

RN 184250-53-1 REGISTRY

CN Guanidine, cyano-, polymer with Araldite PY 322, N,N'-bis(2-hydroxyethyl)ethanedithioamide, (chloromethyl)oxirane, 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis[oxirane] and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Araldite PY 322, polymer with N,N'-bis(2-hydroxyethyl)ethanedithioamide, (chloromethyl)oxirane, cyanoguanidine, 2,2'-[(1-methylethylidene)bis(4,1-

STN search for 10665009

- cyclohexanediylloxymethylene)]bis[oxirane] and 4,4'-(1-methylethylidene)bis[phenol] (9CI)
- CN Ethanedithioamide, N,N'-bis(2-hydroxyethyl)-, polymer with Araldite PY 322, (chloromethyl)oxirane, cyanoguanidine, 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis[oxirane] and 4,4'-(1-methylethylidene)bis[phenol] (9CI)
- CN Oxirane, (chloromethyl)-, polymer with Araldite PY 322, N,N'-bis(2-hydroxyethyl)ethanedithioamide, cyanoguanidine, 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis[oxirane] and 4,4'-(1-methylethylidene)bis[phenol] (9CI)
- CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis-, polymer with Araldite PY 322, N,N'-bis(2-hydroxyethyl)ethanedithioamide, (chloromethyl)oxirane, cyanoguanidine and 4,4'-(1-methylethylidene)bis[phenol] (9CI)
- CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with Araldite PY 322, N,N'-bis(2-hydroxyethyl)ethanedithioamide, (chloromethyl)oxirane, cyanoguanidine and 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis[oxirane] (9CI)

OTHER NAMES:

- CN **Amicure CG 1200-Araldite PY 322-N,N'-bis(2-hydroxyethyl)dithiooxamide-bisphenol A-epichlorohydrin-hydrogenated bisphenol A diglycidyl ether copolymer**
- MF (C21 H36 O4 . C15 H16 O2 . C6 H12 N2 O2 S2 . C3 H5 Cl O . C2 H4 N4 . Unspecified)x
- CI PMS
- PCT Epoxy resin, Manual component, Polyamide, Polyether, Polyother
- SR CA
- LC STN Files: CA, CAPLUS, USPATFULL
- DT.CA CAplus document type: Patent
- RL.P Roles from patents: USES (Uses)

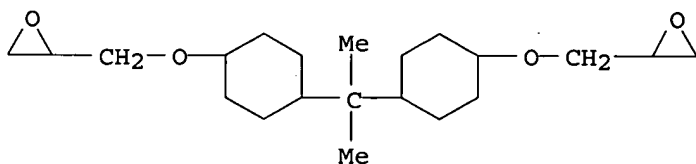
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CCI PMS, MAN

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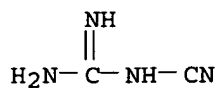
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CM 3

CRN 461-58-5  
CMF C2 H4 N4

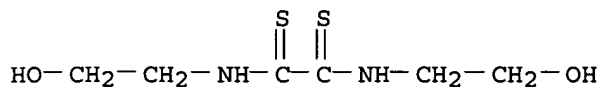
STN search for 10665009



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CRN 120-86-5

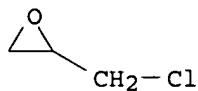
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CM 5

CRN 106-89-8

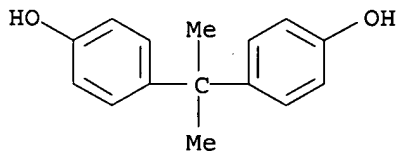
CMF C3 H5 Cl O



CM 6

CRN 80-05-7

CMF C15 H16 O2



1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d his

(FILE 'HOME' ENTERED AT 14:06:08 ON 18 OCT 2004)

FILE 'REGISTRY' ENTERED AT 14:06:12 ON 18 OCT 2004

L1 3 S HYDROGENATED AND BISPHENOL A AND EPOXY  
L2 311 S 13410-58-7/CRN  
L3 0 S L2 AND EPICHLORHYDRIN  
L4 2 S L2 AND EPICHLOROHYDRIN

=> s 12

L5 311 13410-58-7/CRN

STN search for 10665009

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

37.11

37.32

FILE 'CAPLUS' ENTERED AT 14:08:46 ON 18 OCT 2004

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FILE COVERS 1907 - 18 Oct 2004 VOL 141 ISS 17

FILE LAST UPDATED: 17 Oct 2004 (20041017/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l2

L6 388 L2

=> s l6 and photo?

1283514 PHOTO?

L7 104 L6 AND PHOTO?

=> s l7 and anhydride

191117 ANHYDRIDE

L8 17 L7 AND ANHYDRIDE

=> d all 1-17

L8 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:757017 CAPLUS

DN 141:278323

ED Entered STN: 16 Sep 2004

TI **Photosensitive** resin composition and curing product thereof

IN Tanaka, Ryutaro; Koyanagi, Hiroo

PA Nippon Kayaku Kabushiki Kaisha, Japan

SO PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM G03F007-027

ICS G03F007-035; C08G018-67; C08F290-06

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004079452	A1	20040916	WO 2004-JP2718	20040304

STN search for 10665009

W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG,  
 BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR,  
 CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES,  
 ES, FI, FI, GB, GD, GE, GE, GH, GM, HR, HR, HU, HU, ID, IL, IN,  
 IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC,  
 LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX,  
 MZ, MZ, NA, NI  
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,  
 BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,  
 MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA,  
 GN, GQ, GW, ML, MR, NE, SN, TD, TG, BF, BJ, CF, CG, CI, CM, GA,  
 GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI JP 2003-59309 A 20030306  
 JP 2003-166038 A 20030611

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2004079452	ICM	G03F007-027
	ICS	G03F007-035; C08G018-67; C08F290-06

AB Title **photosensitive** resin composition has good sensitivity to actinic energy rays, is hardenable within a short period of time, and can form pattern through development with a dilute aqueous alkali solution to give a cured film through thermal curing in the postcuring step. The composition comprises (1) an aqueous alkali-soluble urethane resin obtained by the reaction of a cyclic carboxylic acid **anhydride** with the reaction products of a diisocyanate compound, a diol compound having an ethylenically unsatd. group, a diol compound having a carboxyl group, and, optionally, a diol compound not having any ethylenically unsatd. group or carboxyl group, (2) a **photopolymer** initiator; and (3) a reactive crosslinking agent. The composition has applications in manufacture of flexible printed circuit boards.

ST **photosensitive** polyurethane compn printed circuit board

IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, carboxyl-containing; **photosensitive** polyurethane composition for manufacture of flexible printed circuit boards)

IT Printed circuit boards

(**photosensitive** polyurethane composition for manufacture of flexible printed circuit boards)

IT Epoxy resins, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(**photosensitive** polyurethane composition for manufacture of flexible printed circuit boards)

IT 71868-10-5, Irgacure 907 82799-44-8, Kayacure DETX S

RL: CAT (Catalyst use); USES (Uses)

(**photosensitive** polyurethane composition for manufacture of flexible printed circuit boards)

IT 85-43-8DP, Tetrahydrophthalic **anhydride**, reaction products with polyurethanes 108-30-5DP, Succinic **anhydride**, reaction products with polyurethanes 552-30-7DP, Trimellitic **anhydride**, reaction products with polyurethanes 757240-44-1DP, reaction products with cyclic carboxylic anhydrides 757240-45-2DP, reaction products with cyclic carboxylic anhydrides 757240-46-3DP, reaction products with cyclic carboxylic anhydrides 757950-23-5DP, reaction products with cyclic carboxylic anhydrides 757950-24-6DP, reaction products with cyclic carboxylic anhydrides 757950-25-7DP, reaction products with cyclic carboxylic anhydrides 757950-26-8DP, reaction products with

STN search for 10665009

cyclic carboxylic anhydrides 757950-27-9DP, reaction products with  
cyclic carboxylic anhydrides  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photosensitive polyurethane composition for manufacture of flexible  
printed circuit boards)

IT 26283-70-5, YX 8000 89118-70-7, YX 4000 269735-86-6, NC 3000  
RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)  
(photosensitive polyurethane composition for manufacture of flexible  
printed circuit boards)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Dainippon Ink And Chemicals Inc; JP 02-232217 A 1990 CAPLUS
- (2) Fuji Photo Film Co Ltd; JP 01-255854 A 1989 CAPLUS
- (3) Kansai Paint Co Ltd; JP 200133959 A 2001
- (4) Kansai Paint Co Ltd; JP 200133960 A 2001
- (5) Nippon Kayaku Co Ltd; JP 2001159815 A 2001 CAPLUS
- (6) Nippon Kayaku Co Ltd; WO 0294904 A1 2002
- (7) Nippon Kayaku Co Ltd; JP 2002338652 A 2002 CAPLUS
- (8) Showa Denko Kabushiki Kaisha; WO 0223273 A2 2002 CAPLUS
- (9) Showa Denko Kabushiki Kaisha; EP 1317691 A 2002 CAPLUS
- (10) Showa Denko Kabushiki Kaisha; JP 14-229201 A 2002
- (11) Showa Denko Kabushiki Kaisha; US 20033398 A1 2002
- (12) Takeda Chemical Industries Ltd; JP 09-52925 A 1997 CAPLUS
- (13) The Nippon Synthetic Chemical Industry Co Ltd; JP 200183699 A 2001

L8 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:649996 CAPLUS

DN 141:174902

ED Entered STN: 12 Aug 2004

TI Curable composition comprising a compound having radically polymerizable  
olefinically unsaturated groups, an oxidation-reduction enzyme, and a  
thiol-functional compound for adhesives and coatings

IN Van den Berg, Keimpe Jan; Benningshof-Hulsbos, Edith

PA Akzo Nobel Coatings International B.V., Neth.

SO PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08F008-00

ICS C08K005-00; C08G085-00

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 42

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004067582	A1	20040812	WO 2004-EP649	20040126
W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GH, HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ, MZ, NA, NI				

PRAI EP 2003-75273 A 20030128

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004067582	ICM	C08F008-00

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ICS C08K005-00; C08G085-00

AB The actinic radiation curable composition comprises a compound having  $\geq 1$  radically polymerizable olefinically unsatd. group and a mol. weight  $>500$ , an oxidation-reduction enzyme, addnl. a thiol-functional compound such as Capcure 3/800. The curable composition cures sufficiently fast to be useful as a coating composition for finishing and refinishing of cars and large transportation vehicles. The composition does not require volatile and/or toxic monomers.

ST actinic radiation curable adhesive coating vehicle; UV curable dispersion acrylic polyester polyoxyalkylene polyurethane thiol crosslinker

IT Coating materials  
(UV-curable; curable composition of acrylic polyurethanes, an oxidation-reduction enzyme, and a thiol-functional compound for adhesives and coatings)

IT Polyurethanes, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(acrylic-polyester-polyoxyalkylene-, preparation and curing; curable composition of acrylic polyurethanes, an oxidation-reduction enzyme, and a thiol-functional compound for adhesives and coatings)

IT Polyoxyalkylenes, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(acrylic-polyester-polyurethane-, preparation and curing; curable composition of acrylic polyurethanes, an oxidation-reduction enzyme, and a thiol-functional compound for adhesives and coatings)

IT Polyesters, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(acrylic-polyoxyalkylene-polyurethane-, preparation and curing; curable composition of acrylic polyurethanes, an oxidation-reduction enzyme, and a thiol-functional compound for adhesives and coatings)

IT Adhesives  
Crosslinking agents  
(curable composition of acrylic polyurethanes, an oxidation-reduction enzyme, and a thiol-functional compound for adhesives and coatings)

IT Enzymes, uses  
RL: CAT (Catalyst use); USES (Uses)  
(curable composition of acrylic polyurethanes, an oxidation-reduction enzyme, and a thiol-functional compound for adhesives and coatings)

IT Crosslinking  
(photochem.; curable composition of acrylic polyurethanes, an oxidation-reduction enzyme, and a thiol-functional compound for adhesives and coatings)

IT 9001-37-0, Glucose oxidase 9003-99-0, Peroxidase 80498-15-3, Laccase  
RL: CAT (Catalyst use); USES (Uses)  
(curable composition of acrylic polyurethanes, an oxidation-reduction enzyme, and a thiol-functional compound for adhesives and coatings)

IT 80497-39-8P 84072-40-2P, Hexahydrophthalic anhydride  
-1,6-hexanediol copolymer 116107-87-0P 420115-56-6P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(curable composition of acrylic polyurethanes, an oxidation-reduction enzyme, and a

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thiol-functional compound for adhesives and coatings)  
IT 7575-23-7, Pentaerythritol tetrakis(3-mercaptopropionate) 33007-83-9,  
Trimethylolpropane tris(3-mercaptopropionate) 101359-87-9, Capcure 3/800  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(curable composition of acrylic polyurethanes, an oxidation-reduction  
enzyme, and a  
thiol-functional compound for adhesives and coatings)  
IT 420123-98-4P 420124-06-7P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and curing; curable composition of acrylic polyurethanes, an  
oxidation-reduction enzyme, and a thiol-functional compound for adhesives  
and  
coatings)  
IT 736137-65-8P 736137-66-9P 736137-67-0P  
736137-68-1P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(thiol crosslinked coatings; curable composition of acrylic polyurethanes,  
an oxidation-reduction enzyme, and a thiol-functional compound for  
adhesives and  
coatings)

L8 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2004:414435 CAPLUS  
DN 140:431505  
ED Entered STN: 21 May 2004  
TI Cellulose acylate films with excellent tear strength and storage stability  
and optical films, display devices, and silver halide photographic  
materials using them  
IN Kato, Eiichi  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 58 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08J005-18  
ICS C08B003-10; C08B015-00; C08F002-46; C08F251-02; C08F290-06;  
G03C001-795; C08L001-08  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 38, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004143392	A2	20040520	JP 2002-359522	20021211
PRAI	JP 2002-253387	A	20020830		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004143392	ICM	C08J005-18
	ICS	C08B003-10; C08B015-00; C08F002-46; C08F251-02; C08F290-06; G03C001-795; C08L001-08
JP 2004143392	FTERM	2H023/FA01; 2H023/FA13; 4C090/AA05; 4C090/AA08; 4C090/BA25; 4C090/BA34; 4C090/CA35; 4C090/DA40; 4F071/AA09; 4F071/AA43X; 4F071/AA77X; 4F071/AA78; 4F071/AA81; 4F071/AC02; 4F071/AC03; 4F071/AC07; 4F071/AC08; 4F071/AC12; 4F071/AC14; 4F071/AC17; 4F071/AC18; 4F071/AE06; 4F071/AF16Y; 4F071/AF30Y; 4F071/AF35Y; 4F071/AF57; 4F071/AH16; 4F071/BB02;



4F071/BC01; 4J011/PA24; 4J011/PA27; 4J011/PA34;  
 4J011/PA36; 4J011/PA38; 4J011/PA43; 4J011/PA45;  
 4J011/PA48; 4J011/PA49; 4J011/PA53; 4J011/PA78;  
 4J011/PA88; 4J011/PB30; 4J011/PC02; 4J011/QA03;  
 4J011/QA07; 4J011/QB13; 4J011/QC03; 4J011/QC05;  
 4J011/QC10; 4J011/SA01; 4J011/SA21; 4J011/SA34;  
 4J011/SA64; 4J011/SA71; 4J011/SA82; 4J011/SA84;  
 4J011/UA01; 4J026/AA02; 4J026/BA25; 4J026/BA26;  
 4J026/BA27; 4J026/BA32; 4J026/BA34; 4J026/BA36;  
 4J026/BA38; 4J026/BA50; 4J026/BB04; 4J026/BB08;  
 4J026/DB36; 4J026/GA08; 4J027/AB02; 4J027/AB10;  
 4J027/AJ01; 4J027/BA07; 4J027/BA17; 4J027/CB10;  
 4J027/CC05; 4J027/CD10

- AB The films are obtained by casting cellulose acylate compns. containing monofunctional polyester macromonomers with  $M_w \leq 2 + 104$ , polymerizable monomers, and **photopolymn.** initiators and irradiating them with lights.
- ST cellulose acylate optical film tear strength; display polarizer weather resistance cellulose acetate; polyester macromonomer **photoirradn photog** support durability
- IT Polyesters, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, graft; cellulose acylate films with good tear strength and weather resistance for optical films, display devices, and silver halide **photog.** materials)
- IT Liquid crystal displays  
 Optical films  
 Polarizers  
 (cellulose acylate films with good tear strength and weather resistance for optical films, display devices, and silver halide **photog.** materials)
- IT **Photographic** films  
 (color; cellulose acylate films with good tear strength and weather resistance for optical films, display devices, and silver halide **photog.** materials)
- IT Polyesters, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (graft; cellulose acylate films with good tear strength and weather resistance for optical films, display devices, and silver halide **photog.** materials)
- IT Polyesters, reactions  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (monofunctional macromonomers; cellulose acylate films with good tear strength and weather resistance for optical films, display devices, and silver halide **photog.** materials)
- IT Polyethers, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-, graft; cellulose acylate films with good tear strength and weather resistance for optical films, display devices, and silver halide **photog.** materials)
- IT Polyesters, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyether-, graft; cellulose acylate films with good tear strength and weather resistance for optical films, display devices, and silver

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halide **photog.** materials)

IT 144857-95-4P 692778-61-3P 692778-62-4P 692778-64-6P 692778-66-8P  
692778-68-0P 692778-70-4P 692778-73-7P 692778-75-9P 692778-77-1P  
692778-79-3P 692778-82-8P 692778-84-0P 692778-85-1P 692778-85-1P  
692778-86-2P 692778-87-3P 692778-88-4P 692778-90-8P  
692778-92-0P 692778-92-0P 692778-95-3P 692778-99-7P  
692779-01-4P 692779-04-7P 692779-06-9P 693236-60-1P 693236-74-7P,  
Glutaric **anhydride**-1,6-hexanediol copolymer monoester with  
glycidol-methyl methacrylate graft copolymer 693236-77-0P 693236-82-7P  
693236-86-1P 693236-91-8P 693243-44-6P 693243-45-7P 693243-47-9P  
693243-49-1P 693257-80-6P 693258-15-0P 693259-40-4P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(cellulose acylate films with good tear strength and weather resistance  
for optical films, display devices, and silver halide **photog.**  
materials)

IT 9004-34-6D, Cellulose, acylates 9012-09-3, Cellulose triacetate  
RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)  
(cellulose acylate films with good tear strength and weather resistance  
for optical films, display devices, and silver halide **photog.**  
materials)

IT 947-19-3, 1-Hydroxycyclohexyl phenyl ketone 3584-23-4 10409-07-1  
15522-59-5 61358-23-4 71449-78-0 81877-47-6 692779-08-1  
692779-09-2 692779-10-5 692779-11-6 692779-13-8  
RL: CAT (Catalyst use); USES (Uses)  
(initiator; cellulose acylate films with good tear strength and weather  
resistance for optical films, display devices, and silver halide  
**photog.** materials)

IT 60806-41-9P 692778-55-5P 692778-56-6P 692778-57-7P 692778-58-8P  
692778-59-9P 692778-60-2P 693236-46-3P, 1,6-Hexanediol-  
tricyclo[5.2.1.0<sup>2,6</sup>]decane-8,9-dicarboxylic acid copolymer monoester with  
2-[2-carboxyethylcarbonyloxy]ethyl methacrylate 693236-49-6P,  
1,4-Cyclohexanedimethanol-succinic **anhydride** copolymer  
monoacrylate 693236-52-1P, Dodecenylsuccinic **anhydride**  
-glutaric **anhydride**-5-norbornene-2,3-dimethanol copolymer  
monocarbamate with 2-methacryloyloxyethyl isocyanate 693236-55-4P  
693236-58-7P 693236-63-4P 693236-66-7P, Pimelic acid-  
tricyclo[5.2.1.0<sup>2,6</sup>]decane-3,4-diol copolymer monoester with glycidyl  
methacrylate 693236-68-9P 693236-70-3P 693236-72-5P 693257-51-1P  
693257-67-9P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT  
(Reactant); TEM (Technical or engineered material use); PREP  
(Preparation); RACT (Reactant or reagent); USES (Uses)  
(macromonomer; cellulose acylate films with good tear strength and  
weather resistance for optical films, display devices, and silver  
halide **photog.** materials)

IT 9002-89-5, Poly(vinyl alcohol)  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polarizer; cellulose acylate films with good tear strength and weather  
resistance for optical films, display devices, and silver halide  
**photog.** materials)

L8 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2004:293255 CAPLUS  
DN 140:322495  
ED Entered STN: 09 Apr 2004  
TI Epoxy resin compositions containing silicones, solid state devices  
encapsulated therewith and method  
IN Gorczyca, Thomas Bert

STN search for 10665009

PA General Electric Company, USA  
SO U.S. Pat. Appl. Publ., 19 pp.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM B32B027-38  
NCL 428413000  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004067366	A1	20040408	US 2002-265422	20021007
	US 6800373	B2	20041005		
	JP 2004277697	A2	20041007	JP 2003-346640	20031006
	EP 1408087	A1	20040414	EP 2003-256305	20031007
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	US 2002-265422	A	20021007		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004067366	ICM	B32B027-38
	NCL	428413000
JP 2004277697	FTERM	4J002/CD01W; 4J002/CD02W; 4J002/CD05W; 4J002/CD06W; 4J002/CD07W; 4J002/CD14W; 4J002/CP03X; 4J002/CP04X; 4J002/EF126; 4J002/EG048; 4J002/EG089; 4J002/EV298; 4J002/EX037; 4J002/FD050; 4J002/FD060; 4J002/FD146; 4J002/FD158; 4J002/FD317; 4J002/GQ05; 4J036/AD08; 4J036/AJ09; 4J036/AJ18; 4J036/DB15; 4J036/FA13; 4J036/FB16; 4J036/GA12; 4J036/GA22; 4J036/GA24; 4J036/JA07; 4M109/AA01; 4M109/EB04; 4M109/EB18; 4M109/GA01
EP 1408087	ECLA	C08G059/42T; C08L063/00
AB	Epoxy resin compns. are disclosed which comprise (A) at least one silicone resin, (B) at least one epoxy resin, (C) at least one <b>anhydride</b> curing agent, (D) at least one siloxane surfactant, and (E) at least one ancillary curing catalyst. Also disclosed are a packaged solid state devices comprising a package, a chip, and an encapsulant comprising a composition of the invention. A method of encapsulating a solid state device is also provided.	
ST	epoxy resin silicone encapsulant solid state device	
IT	Epoxy resins, uses RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (alicyclic; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)	
IT	Epoxy resins, uses RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (aliphatic; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)	
IT	Crosslinking agents ( <b>anhydride</b> ; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)	
IT	Anhydrides RL: RCT (Reactant); RACT (Reactant or reagent) (curing agent; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)	
IT	Polysiloxanes, uses	

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- RL: MOA (Modifier or additive use); USES (Uses)  
(di-Me, 3-hydroxypropyl group-terminated, ethoxylated, SF 1488, surfactant; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)
- IT Charge coupled devices  
Crosslinking catalysts  
Electroluminescent devices  
Electrooptical instruments  
Encapsulants  
Integrated circuits  
Lenses  
Optical couplers  
    **Photodiodes**  
    **Phototransistors**  
Semiconductor devices  
    (epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)
- IT Epoxy resins, uses  
Polysiloxanes, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
    (epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)
- IT Polysiloxanes, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
    (epoxy, Silikoftal ED; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)
- IT Phenolic resins, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
    (epoxy, novolak; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)
- IT Phenolic resins, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
    (glycidyl ethers, novolak; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)
- IT Epoxy resins, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
    (phenolic, novolak; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)
- IT Epoxy resins, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
    (polysiloxane-, Silikoftal ED; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)
- IT Surfactants  
    (siloxane; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)
- IT 85-42-7, Hexahydrophthalic **anhydride** 85-44-9, Phthalic **anhydride** 89-32-7, Pyromellitic dianhydride 115-27-5, Chlorendic **anhydride** 117-08-8, Tetrachlorophthalic **anhydride** 826-62-0, Bicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic **anhydride** 1122-17-4, Dichloromaleic **anhydride** 19438-60-9, Hexahydro-4-methylphthalic **anhydride** 25377-73-5, Dodecenylsuccinic **anhydride** 31307-24-1, Methylbicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic **anhydride**  
RL: RCT (Reactant); RACT (Reactant or reagent)

STN search for 10665009

(curing agent; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)

IT 301-10-0, Stannous octoate 557-09-5, Zinc octoate  
RL: CAT (Catalyst use); USES (Uses)

(curing catalyst; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)

IT 2095-03-6 2386-87-0 13410-52-1 13410-58-7 15336-82-0 25068-38-6,  
Bisphenol-A epoxy resin 25085-98-7, CY 179 26283-70-5, Eponex  
1510 30424-08-9 42423-25-6, Bisphenol-F-epichlorohydrin copolymer  
50927-19-0, Z 6018 71296-97-4 96141-20-7, Epon 862 677719-08-3,  
Araldite AY 238  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)

IT 9003-35-4D, Formaldehyde-phenol copolymer, glycidyl ethers 9016-83-5D, Cresol-formaldehyde copolymer, glycidyl ethers  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(novolak; epoxy resin compns. containing silicones, solid state devices encapsulated therewith and method)

L8 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2004:118465 CAPLUS  
DN 140:189980  
ED Entered STN: 13 Feb 2004  
TI **Photocurable** thermosetting resin composition and cured products  
IN Ogawa, Yuta; Imataki, Kazumasa  
PA Taiyo Ink Mfg Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-027  
ICS C08G059-24; C08G059-38; G03F007-032; H05K003-28  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 37, 38, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004045792	A2	20040212	JP 2002-203523	20020712
	CN 1472253	A	20040204	CN 2003-145829	20030711
PRAI	JP 2002-203523	A	20020712		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004045792	ICM	G03F007-027
	ICS	C08G059-24; C08G059-38; G03F007-032; H05K003-28
JP 2004045792	FTERM	2H025/AA02; 2H025/AA10; 2H025/AB15; 2H025/AC01; 2H025/AD01; 2H025/BC13; 2H025/BC42; 2H025/BC74; 2H025/BC86; 2H025/BD53; 2H025/CA00; 2H025/CB30; 2H025/CC20; 2H025/FA29; 4J036/AA01; 4J036/AA06; 4J036/AD08; 4J036/CA19; 4J036/CA21; 4J036/CA25; 4J036/CA28; 4J036/CD10; 4J036/DA01; 4J036/DC05; 4J036/DC31; 4J036/DC35; 4J036/DC41; 4J036/DD07; 4J036/EA03; 4J036/FA10; 4J036/GA26; 4J036/HA02; 4J036/JA08; 4J036/JA10; 5E314/AA25; 5E314/AA27; 5E314/AA32; 5E314/BB01; 5E314/BB11; 5E314/BB12; 5E314/CC01; 5E314/FF06; 5E314/GG11; 5E314/GG14

- AB Title resin composition having good flexibility, developing, curing properties, platability, and alkali solubility comprises (A) reaction products of saturated and/or unsatd. polybasic acid anhydrides with reaction products of multifunctional bisphenol-type epoxy resin with unsatd. monocarboxylic acids, (B) reaction products of saturated and/or unsatd. polybasic acid anhydrides with reaction products of multifunctional polyester-type epoxy resin with unsatd. monocarboxylic acids, (C) **photopolymn.** initiators, (D) epoxy curing agents, (E) solvents, and (F) epoxy compds. containing  $\geq 2$  epoxy groups per mol. The composition has application as solder resist in manufacture of flexible printed circuit boards.
- ST **photocurable** thermosetting epoxy compn solder resist
- IT Epoxy resins, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylates; **photocurable** thermosetting resin composition for solder resist in manufacture of flexible printed circuit boards)
- IT Polyesters, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (epoxy, reaction products; **photocurable** thermosetting resin composition for solder resist in manufacture of flexible printed circuit boards)
- IT Printed circuit boards  
 Solder resists  
 (photocurable thermosetting resin composition for solder resist in manufacture of flexible printed circuit boards)
- IT Epoxy resins, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (photocurable thermosetting resin composition for solder resist in manufacture of flexible printed circuit boards)
- IT Epoxy resins, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-, reaction products; **photocurable** thermosetting resin composition for solder resist in manufacture of flexible printed circuit boards)
- IT 79-10-7DP, Acrylic acid, epoxy resin acrylates 85-43-8DP, Tetrahydrophthalic **anhydride**, epoxy resin esters 106-89-8DP, Epichlorohydrin, reaction products with epoxy resins, acrylates, esters 1333-16-0DP, Bisphenol F, epoxy resins, acrylates, esters 657433-05-1DP, reaction products, acrylates, esters  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photocurable thermosetting resin composition for solder resist in manufacture of flexible printed circuit boards)
- IT 108-78-1, Melamine, uses 119313-12-1, Irgacure 369  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (photocurable thermosetting resin composition for solder resist in manufacture of flexible printed circuit boards)
- IT 25068-38-6, Epikote 1001  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (photocurable thermosetting resin composition for solder resist in manufacture of flexible printed circuit boards)
- IT 29570-58-9, Dipentaerythritol hexaacrylate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photocurable thermosetting resin composition for solder resist in manufacture of flexible printed circuit boards)

STN. search for 10665009

L8 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2003:674145 CAPLUS  
DN 139:221533  
ED Entered STN: 28 Aug 2003  
TI Low-malodor heat-developable **photosensitive** materials, their  
manufacture, and their imaging by laser scanning exposure  
IN Takeyama, Toshihisa  
PA Konica Co., Japan  
SO Jpn. Kokai Tokkyo Koho, 59 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03C001-498  
ICS G03C001-76; G03C005-08  
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

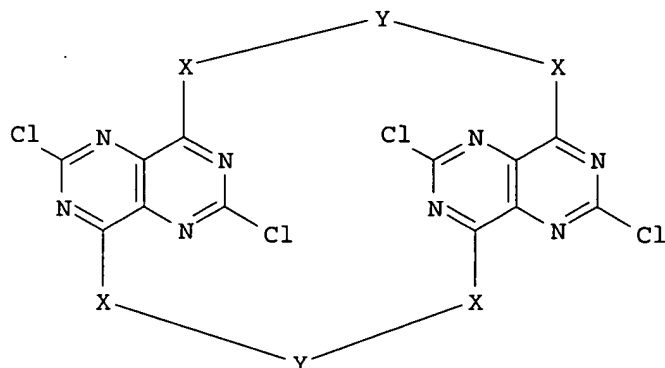
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003241334	A2	20030827	JP 2002-39789	20020218
PRAI	JP 2002-39789		20020218		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003241334	ICM	G03C001-498
	ICS	G03C001-76; G03C005-08

OS MARPAT 139:221533

GI



I

AB The **photosensitive** material has on 1 side of a support a backing layer and on the other side of the support an image-forming layer containing at least organic Ag salts, **photosensitive** Ag halides, and reducing agents and protective layers, wherein the image-forming layer or the protective layer contains binder of  $\geq 1$  of resins selected from cycloolefin polymers, N-phenylmaleimide polymers, 1,1-bis(4-hydroxyphenyl)cyclohexane polymers, and 1,1-bis(4-hydroxyphenyl)-3,3,5-trimethylcyclohexane polymers. In another alternative, the protective layer contains  $\geq 1$  of binder resins having heat distortion temperature (ASTM D 648, load 18.6 kg/cm<sup>2</sup>) 100-300°, preferably, polyarylates, poly(ether sulfones), and/or polyamide-imides. In another alternatives, the protective layer comprise a cured layer formed by crosslinking of

crosslinkable compds. with actinic energy ray irradiation Preferably, an adhesive layer is disposed between the image-forming layer and the protective layer. The **photosensitive** material is manufactured by lamination-transfer of a protective layer on a releasable support onto an image-forming layer/support laminate. The adhesive layer will be laminated on the image-forming layer or laminated with the protective layer prior to the lamination-transfer step. In another alternative, a heat-developable **photosensitive** material has an image-forming layer or a protective layer containing binders involving  $\geq 1$  of resins with total of acid value and hydroxyl value being 20-300 mg-KOH/g and aromatic polyisocyanates or metal polyvalent alkoxides as crosslinking agents. In another alternative, the protection layer or the backing layer contains Mg silicate, SiO<sub>2</sub>-ZnO-Al<sub>2</sub>O<sub>3</sub> composite, Li<sub>2</sub>CO<sub>3</sub>-Al(OH)<sub>3</sub> inclusion compds., and/or zeolite. In another alternative, the protective layer or the backing layer contain  $\geq 1$  compds. selected from oxazoline group-containing compds., cyclodextrin (derivs.), thiaclixarene (derivs.), or compds. represented by general formula I (X = divalent linkage composed of hetero atom; Y = divalent organic group). The **photosensitive** material is imaged by scanning exposure by using laser light whose angle made by a surface to be exposed and the laser light is not substantially vertical, by using vertical multi-laser whose exposure wavelengths are not uniform, or by using  $\geq 2$  laser lights.

ST heat developable **photosensitive** material protective layer binder

IT Zeolites (synthetic), uses

RL: TEM (Technical or engineered material use); USES (Uses)

(HSZ 331HSA, HSZ 500KOH, protective layer containing; manufacture of low-malodor

heat-developable **photosensitive** materials and their imaging by laser scanning exposure)

IT Zeolite HY

RL: TEM (Technical or engineered material use); USES (Uses)

(HSZ 390HUA, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)

IT Mordenite-type zeolites

RL: TEM (Technical or engineered material use); USES (Uses)

(HSZ 690HOA, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)

IT Ultrastable Y zeolites

RL: TEM (Technical or engineered material use); USES (Uses)

(HY, HSZ 330HUA, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)

IT Nitrile rubber, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(Nipol SX 1503, adhesive layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)

IT Polyvinyl butyrals

RL: TEM (Technical or engineered material use); USES (Uses)

(S-Lec BL-S, S-Lec BL 5Z, adhesive layer containing; manufacture of low-malodor

heat-developable **photosensitive** materials and their imaging by laser scanning exposure)

IT Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(aromatic, protective layer containing; manufacture of low-malodor heat-developable

**photosensitive** materials and their imaging by laser scanning



- exposure)
- IT Isoprene-styrene rubber  
RL: TEM (Technical or engineered material use); USES (Uses)  
(block, triblock, Kraton D 1117, adhesive layer; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polycarbonates, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(cardo, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT **Photographic** films  
(heat-developable; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polyesters, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(isocyanate-crosslinked, backing layer; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polycarbonates, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phenoxy resin-, isocyanate-crosslinked protective layer; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polyesters, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phenoxy-, isocyanate-crosslinked protective layer; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polyimides, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyamide-, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Phenoxy resins  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polycarbonate-, isocyanate-crosslinked protective layer; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Cardo polymers  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polycarbonates, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polyurethanes, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-, backing layer; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Phenoxy resins  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-, isocyanate-crosslinked protective layer; manufacture of

STN search for 10665009

- low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polysulfones, uses  
Polysulfones, uses  
Polysulfones, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyether-, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polyamides, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyimide-, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Cycloalkenes  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polymers, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polyethers, uses  
Polyethers, uses  
Polyethers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polysulfone-, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polycarbonates, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Polyurethanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(protective layer, backing layer, and image-forming layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT Zeolite HY  
RL: TEM (Technical or engineered material use); USES (Uses)  
(ultrastable, HSZ 330HUA, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 129510-27-6, Apec 1600  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Apec 2000, Apec 1800, Apec 1700, emulsion layer and/or protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 26007-55-6, Apel APL 6011  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Apel APL 6015, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 9004-36-8, CAB 500-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(CAB 175-15, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 9004-39-1, Cellulose acetate propanoate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(CAP 482-20, backing layer containing; manufacture of low-malodor

STN search for 10665009

heat-developable **photosensitive** materials and their imaging  
by laser scanning exposure)

IT 25135-52-8, Iupilon Z 200  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Iupilon Z 400, protective layer containing; manufacture of low-malodor  
heat-developable **photosensitive** materials and their imaging  
by laser scanning exposure)

IT 1343-88-0, Magnesium silicate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Mizukanite P 1S, protective layer containing; manufacture of low-malodor  
heat-developable **photosensitive** materials and their imaging  
by laser scanning exposure)

IT 31621-07-5, Acrylonitrile-N-phenylmaleimide-styrene copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Polyimilex PAS 1460, protective layer containing; manufacture of  
low-malodor  
heat-developable **photosensitive** materials and their imaging  
by laser scanning exposure)

IT 81598-70-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Polyimilex PMS 101, protective layer containing; manufacture of low-malodor  
heat-developable **photosensitive** materials and their imaging  
by laser scanning exposure)

IT 26316-43-8, N-Phenylmaleimide-styrene copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Polyimilex PS 0260, protective layer containing; manufacture of low-malodor  
heat-developable **photosensitive** materials and their imaging  
by laser scanning exposure)

IT 67653-78-5, Dipentaerythritol hexaacrylate homopolymer 101232-56-8,  
Dipentaerythritol hexaacrylate-Kayarad R 128H copolymer 111431-68-6,  
Dianal BR 87-dipentaerythritol hexaacrylate copolymer 257887-56-2  
, Celloxide 2021-Epo Tohto ST 3000 copolymer 257887-57-3, Celloxide  
2081-Epolead GT 30 copolymer 272458-71-6, Dipentaerythritol  
hexaacrylate-UV 1700B copolymer 586963-94-2, Aronix M  
210-dipentaerythritol hexaacrylate-NK Oligo U 4HA copolymer 586963-95-3,  
Dipentaerythritol acrylate-pentaerythritol acrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(actinic energy ray-cured protective layer; manufacture of low-malodor  
heat-developable **photosensitive** materials and their imaging  
by laser scanning exposure)

IT 25037-45-0 26471-16-9 39281-59-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(assumed monomers, protective layer containing; manufacture of low-malodor  
heat-developable **photosensitive** materials and their imaging  
by laser scanning exposure)

IT 586971-66-6P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(backing layer containing; manufacture of low-malodor heat-developable  
**photosensitive** materials and their imaging by laser scanning  
exposure)

IT 586963-92-0P, Coronate C 3041-Vylon 280 copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(backing layer; manufacture of low-malodor heat-developable  
**photosensitive** materials and their imaging by laser scanning  
exposure)

IT 54323-23-8P 160536-34-5P 581267-92-7P 586963-96-4P, Coronate  
2030-Phenoxy PKHH copolymer 586963-97-5P 586963-98-6P 586963-99-7P  
586964-00-3P 586964-01-4P 586964-02-5P 586971-58-6P, CAB

STN search for 10665009

- 500-5-Coronate 2255 copolymer 586971-59-7P, CAB 175-15-Coronate 2030 copolymer 586971-60-0P, Coronate 2255-Phenoxy PKHH copolymer 586971-61-1P 586971-62-2P 586971-63-3P, Apex 2000-Coronate 2471-Phenoxy PKHH copolymer 586971-64-4P 586971-65-5P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(crosslinked protective layer; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 129188-99-4D, 1,1-Bis(4-hydroxyphenyl)-3,3,5-trimethylcyclohexane, copolycarbonate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(emulsion layer and/or protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 586963-93-1P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(image-forming layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 105729-79-1 700836-36-8  
RL: TEM (Technical or engineered material use); USES (Uses)  
(isoprene-styrene rubber, block, triblock, Kraton D 1117, adhesive layer; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 9003-18-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(nitrile rubber, Nipol SX 1503, adhesive layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 1886-74-4 4450-68-4 5551-72-4 85342-62-7 133710-62-0 193222-02-5 380848-50-0  
RL: CAT (Catalyst use); USES (Uses)  
(precursor, protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 586971-17-7P, Vylon UR 3210  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)
- IT 97-39-2 101-01-9 102-06-7 7585-39-9,  $\beta$ -Cyclodextrin 7585-39-9D,  $\beta$ -Cyclodextrin, derivs. 23739-88-0, Triacetyl- $\beta$ -cyclodextrin 24936-68-3, Iupilon S 2000, uses 25667-42-9, Radel A 300 26590-50-1, U-Polymer U 100 95877-36-4, Maleic anhydride-N-phenylmaleimide-styrene copolymer 117537-52-7, Mizukanite P 1 136939-35-0, Mizukalac L 156831-43-5, Mizukanite HP 182496-55-5 182496-61-3 182496-69-1 182496-77-1 195532-19-5 197311-81-2 216500-22-0, Vylomax HR 14ET 220184-93-0 227762-52-9 227762-53-0 249510-34-7 253783-03-8, Vylon UR 4122 363133-85-1, Vylomax HR 15ET 443144-38-5 452057-52-2, Polyimilex PSX 0371 586964-03-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(protective layer containing; manufacture of low-malodor heat-developable **photosensitive** materials and their imaging by laser scanning exposure)

STN search for 10665009

L8 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2003:386771 CAPLUS  
DN 138:386502  
ED Entered STN: 21 May 2003  
TI Polymer compositions for optical waveguides and their cured products  
IN Koyanagi, Takao; Yokoshima, Minoru  
PA Nippon Kayaku Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08G059-16  
ICS G02B006-12  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 37, 73

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003147045	A2	20030521	JP 2001-350739	20011115
PRAI	JP 2001-350739		20011115		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003147045	ICM	C08G059-16
	ICS	G02B006-12

AB The compns., useful for integrated optics, etc., comprise (A) carboxyl-containing epoxy compds. prepared by reaction of (a) epoxy compds. having  $\geq 2$  epoxy groups, (b) compds. having 1 carboxyl group and 2 OH groups, and (c) polybasic acid anhydrides, (B) other epoxy-containing compds. and/or oxetane compds., and (C) cationic **photoinitiators**. Thus, a Si substrate was coated with a composition containing (A) a reaction product of hydrogenated bisphenol A diglycidyl ether, dimethylolpropionic acid, and succinic **anhydride**, (B) Epolead GT 301 (trifunctional alicyclic epoxy compound) and 1,3-bis[1-(2,3-epoxypropoxy)-1-trifluoromethyl-2,2,2-trifluoroethyl]benzene, and (C) bis[4-(diphenylsulfonium)phenyl]sulfide bishexafluorophosphate (I), irradiated with UV, coated with a composition containing A, (D) 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexanecarboxylate and bisphenol A diglycidyl ether, and I, irradiated with UV through a neg. mask, and developed with 3% diethanolamine solution to give a waveguide with low optical loss.

ST epoxy resin optical waveguide oxetane integrated circuit; bisphenol glycidyl methylolpropionic acid succinic **anhydride** polyester; epoxypropoxy fluoromethyl fluoroethyl benzene epoxycyclohexylmethyl epoxycyclohexanecarboxylate

IT Fluoropolymers, uses  
Polyesters, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy; polymer compns. for optical waveguides)

IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(fluorine-containing; polymer compns. for optical waveguides)

IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-; polymer compns. for optical waveguides)

IT Optical integrated circuits  
Optical waveguides  
(polymer compns. for optical waveguides)

STN search for 10665009

IT 526183-47-1P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(polymer compns. for optical waveguides)  
IT 526183-48-2P 526183-49-3P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymer compns. for optical waveguides)

L8 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2003:111384 CAPLUS  
DN 138:161081  
ED Entered STN: 13 Feb 2003  
TI Light-sensitive resin composition for products such as printed circuit boards, light-guiding plates  
IN Tanaka, Ryutaro; Koyanagi, Takao  
PA Nippon Kayaku Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-027  
ICS C08F283-01; C08G063-52; G02B006-12; G03F007-038; H05K003-18; H05K003-28; H05K003-46  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003043684	A2	20030213	JP 2001-236324	20010803
PRAI	JP 2001-236324		20010803		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003043684	ICM	G03F007-027
	ICS	C08F283-01; C08G063-52; G02B006-12; G03F007-038; H05K003-18; H05K003-28; H05K003-46

AB The title composition contains an alkali-solubilizable polyester, a butadiene/acrylonitrile copolymer, and polybasic acid **anhydride** and may contain a diol excluding the previous diol. The composition shows the good light-sensitivity and provides the product of good properties on flexibility, contact, hardness, chemical resistance, heat-resistance, and plating resistance.  
ST light resin compn printed circuit guiding plate  
IT Optical instruments  
(light-guiding plate; light-sensitive resin composition for products such as printed circuit boards, light-guiding plate)  
IT Light-sensitive materials  
**Photoresists**  
Printed circuit boards  
Solder resists  
(light-sensitive resin composition for products such as printed circuit boards, light-guiding plate)  
IT Polyesters, preparation  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(light-sensitive resin composition for products such as printed circuit boards, light-guiding plate)  
IT 496802-82-5P, YX 8000-acrylic acid-1,3-butadiene-acrylonitrile-

STN search for 10665009

Pyromellitic acid copolymer 496802-86-9P, RE 310S-acrylic acid-1,3-butadiene-acrylonitrile-ethylene glycol-Pyromellitic anhydride copolymer

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(light-sensitive resin composition for products such as printed circuit boards, light-guiding plate)

IT 496802-72-3P, RE 310S-acrylic acid-1,3-butadiene-acrylonitrile-pyromellitic anhydride copolymer 496802-76-7P, YX 4000-acrylic acid-1,3-butadiene-acrylonitrile-3,3',4,4'-Diphenyl sulfone tetracarboxylic anhydride copolymer

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyester resin; light-sensitive resin composition for products such as printed circuit boards, light-guiding plate)

L8 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:927484 CAPLUS

DN 138:5395

ED Entered STN: 06 Dec 2002

TI Light- and heat-curable acrylic epoxy resin composition for printed circuit boards

IN Saito, Teruo

PA Taiyo Ink Manufacturing Co., Ltd., Japan

SO PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C08G059-14

ICS C08G059-42; G03F007-027; G03F007-032; H05K003-38

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 74, 76

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002096969	A1	20021205	WO 2002-JP4955	20020522
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				

PRAI JP 2001-156328 A 20010525

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002096969	ICM	C08G059-14
	ICS	C08G059-42; G03F007-027; G03F007-032; H05K003-38

AB A light- and heat-curable resin composition, which can be used as the solder resist and the insulating interlayers in the preparation of printed circuit boards by a build-up process, is composed of (A) a resin compound with more than two (meth)acryloyl groups and a carboxyl group per mol., a Mw of 2,000-40,000, and an acid value of 50-250 mgKOH/g, (B) a compound that has more than one (meth)acryloyl groups and a carboxyl group per mol. and a Mw of 300-1,500, (C) a photo-radical polymerization initiator, and (D) an epoxy resin. Thus, 70 parts of main component, which is composed of varnish A-1 prepared from the reaction of a cresol novolac-type epoxy resin (Epiclone N680), acrylic acid, and tetrahydrophthalic acid

- anhydride 90, varnish B-1 prepared from an acrylate (PE 3A) and 5-(2,5-dioxotetrahydrofuryl)-3-methyl-3-cyclohexane-1,2-dicarboxylic acid anhydride 28, photo-sensitive initiator Irgacure 907 12 parts and other additives, and 30 parts of hardening agent, which contains epoxy urethane acrylate prepared from cresol-type epoxy resin, acrylic acid, isophorone diisocyanate, and pentaerythritol triacrylate, 20, pentaerythritol triacrylate 36, melamine 10, DEN 438 27, and other additives, were mixed to obtain the titled resin composition
- ST light heat curable acrylic epoxy compn printed circuit board
- IT Epoxy resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (bisphenol F-based, reaction product with epichlorohydrin and anhydrides; light- and heat-curing acrylic epoxy resin composition for printed circuit boards)
- IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (epoxy, acrylates; light- and heat-curing epoxy resin composition for wiring boards)
- IT Phenolic resins, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (epoxy, novolak, DEN 438, EPPN 201; light- and heat-curing acrylic epoxy resin composition for printed circuit boards)
- IT Phenolic resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (epoxy, novolak, acrylates; light- and heat-curing acrylic epoxy resin composition for printed circuit boards)
- IT Printed circuit boards  
 (light- and heat-curing epoxy resin composition for wiring boards)
- IT Epoxy resins, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (phenolic, novolak, DEN 438, EPPN 201; light- and heat-curing acrylic epoxy resin composition for printed circuit boards)
- IT Epoxy resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (phenolic, novolak, acrylates; light- and heat-curing acrylic epoxy resin composition for printed circuit boards)
- IT Epoxy resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyurethane-, acrylates; light- and heat-curing epoxy resin composition for wiring boards)
- IT 71868-10-5, Irgacure 907 477327-57-4, CGI 325  
 RL: CAT (Catalyst use); USES (Uses) (light- and heat-curing acrylic epoxy resin composition for printed circuit boards)
- IT 79-10-7DP, Acrylic acid, reaction products with epoxy resin 106-89-8DP, Epichlorohydrin, reaction products with epoxy resins 4098-71-9DP, Isophoronediiisocyanate, reaction product with acrylic acid treated epoxy resins and pentaerythritol triacrylate 26283-70-5DP, YX 8000, reaction products with acrylic acid, further react with anhydrides 73003-90-4DP, Epiclone B 4400, reaction products with acrylic acid-treated epoxy resins 87912-85-4DP, Epiclone N 680, reaction products with acrylic acid, further react with 4,5,6,7-tetrahydroxy-1,3-isobenzofurandione 132695-52-4DP, 1,3-Isobenzofurandione, 4,5,6,7-Tetrahydroxy-, reaction



STN search for 10665009

products with epoxy resins

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (light- and heat-curing acrylic epoxy resin composition for printed circuit boards)

IT 3524-68-3DP, PE 3A, reaction products 73003-90-4DP, reaction products

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(light- and heat-curing acrylic epoxy resin composition for printed circuit boards)

IT 63957-64-2, DEN 438 81775-74-8, EPPN 201

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(light- and heat-curing acrylic epoxy resin composition for printed circuit boards)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Nippon Shokubai Co Ltd; JP 09-87360 A 1996 CAPLUS
- (2) Nippon Shokubai Co Ltd; US 5849857 A 1996 CAPLUS
- (3) Nippon Shokubai Co Ltd; EP 728788 A1 1996 CAPLUS
- (4) Taiyo Ink Manufacturing Co Ltd; JP 08-274445 A 1996 CAPLUS
- (5) Taiyo Ink Manufacturing Co Ltd; JP 09-185166 A 1997 CAPLUS
- (6) Taiyo Ink Manufacturing Co Ltd; JP 09-235355 A 1997 CAPLUS
- (7) Taiyo Ink Manufacturing Co Ltd; JP 09-54434 A 1999 CAPLUS
- (8) Taiyo Ink Manufacturing Co Ltd; JP 11-158252 A 1999 CAPLUS
- (9) Taiyo Ink Manufacturing Co Ltd; JP 11-286535 A 1999 CAPLUS
- (10) Taiyo Ink Manufacturing Co Ltd; GB 2301826 A 1999 CAPLUS
- (11) Taiyo Ink Manufacturing Co Ltd; US 5948514 A 1999 CAPLUS

L8 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:696496 CAPLUS

DN 137:233640

ED Entered STN: 13 Sep 2002

TI Thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications

IN Huang, Mitchell; Kropp, Michael A.

PA 3M Innovative Properties Company, USA

SO U.S. Pat. Appl. Publ., 10 pp., Cont.-in-part of U. S. Ser. No. 736,896. CODEN: USXXCO

DT Patent

LA English

IC ICM B32B027-38

NCL 428414000

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 39, 76

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002127407	A1	20020912	US 2001-947091	20010904
	US 6670017	B2	20031230		
	US 6346330	B1	20020212	US 2000-736896	20001214
	WO 2003021138	A1	20030313	WO 2002-US26029	20020815
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,				

STN search for 10665009

CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
NE, SN, TD, TG  
EP 1432936 A1 20040630 EP 2002-797738 20020815  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK  
PRAI US 2000-736896 A2 20001214  
US 2001-947091 A 20010904  
WO 2002-US26029 W 20020815

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2002127407	ICM	B32B027-38
	NCL	428414000
US 2002127407	ECLA	B29C067/24D; C08F008/00; C08L063/08; F16J015/10B; F16J015/14

AB A form-in-place gasket is produced using automated placement followed by **photocuring** of a pattern of a thixotropic non-silicone composition comprising a liquid polyolefin oligomer, a reactive diluent, and a curative. The form-in-place gasket, after curing, has a level of total outgassing components of 10 µg/g to 45 µg/g. The curative responds to actinic radiation and heat, and may contain a **photoinitiator**. A **photocurable**, form-in-place gasket according can further comprise a thixotropic filler, which is preferably fumed silica, in amount from 8.0% to 12.0%. Thus, a **photocurable** composition was prepared which comprised Kraton Liquid L 207 epoxy functional olefin base, Eponex 1510 epoxy resin, Pripol 2033 dimer diol, Aerosil R 805 filler, and a catalyst mixture comprising Rhodorsil 2074, isopropylthioxanthone and Heloxy 107.

ST thixotropic agent **photocurable** compn gasket prodn electronic device fabrication

IT Epoxy resins, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(composition bases; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT Linseed oil  
RL: TEM (Technical or engineered material use); USES (Uses)  
(epoxidized, reactive diluent; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT Polyolefins  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(liquid oligomers; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT Butadiene rubber, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(of 1,2-configuration, hydroxy-terminated, liquid; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT Crosslinking  
(**photochem.** and radiochem.; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT Crosslinking agents  
Electronic device fabrication  
Gaskets  
Thixotropic agents  
(thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

STN search for 10665009

IT 25377-73-5, Dodecenylsuccinic **anhydride**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(DDSA, reactive diluent; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT 9003-17-2  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(butadiene rubber, of 1,2-configuration, hydroxy-terminated, liquid; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT 7631-86-9, Fumed silica, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(colloidal, thixotropic agent; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT 250364-00-2, Kraton Liquid L 207  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(composition base; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT 26283-70-5, Eponex 1510 128771-71-1, Araldite XB 4122  
146246-76-6, Heloxy 107  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(high mol. weight-enriched, composition base; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT 158516-85-9, Pripol 2033  
RL: TEM (Technical or engineered material use); USES (Uses)  
(reactive diluent; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT 112153-70-5, Aerosil R 805  
RL: MOA (Modifier or additive use); USES (Uses)  
(thixotropic filler; thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

IT 135842-73-8, AC 39  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(thixotropic non-silicone composition-based **photocurable** form-in-place gaskets for electronic applications)

L8 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:465593 CAPLUS

DN 137:54619

ED Entered STN: 21 Jun 2002

TI Manufacture of energy ray-curable epoxy resin acrylates by using reduced amounts of or without using halogen-containing catalysts and their resin compositions for solder resists

IN Ichinose, Hidetoshi; Yamashina, Hirozo; Ishikawa, Hidenobu

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08G059-17

ICS C08G059-58; C08G059-68

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI	JP 2002173518	A2	20020621	JP 2001-281040	20010917
PRAI	JP 2000-296512	A	20000928		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 2002173518	ICM	C08G059-17
	ICS	C08G059-58; C08G059-68

- AB The energy ray-curable resins (I) are prepared by reacting (A) HO-containing modified epoxy acrylates prepared by a reaction catalyzed by, preferably nonhalogen or phosphine-based catalysts, (a1) bifunctional epoxy resins, (a2) monocarboxylic acids bearing (meth)acryloyl groups, and (a3) dicarboxylic acids involving those bearing (meth)acryloyl groups at a ratio satisfying  $0.9na1 < na2 + na3 < 1.1na1$  and  $0.2 < na2/na3 < 4.0$  ( $na1$  = molar number of total epoxy groups in a1;  $na2$ ,  $na3$  = molar nos. of total CO<sub>2</sub>H in a2 and a3, resp.) and (B) acid anhydrides. The compns. containing the resins I and epoxy compds. (II) show high sensitivity to UV, electron beam, etc., are developable with aqueous alkalis, offers cured films having high heat resistance, hardness, elongation, elec. properties, and are useful for permanent protection masks such as solder resists for printed circuits, etc.
- ST energy ray curable epoxy resin acrylate; acid **anhydride** hydroxy epoxy acrylate reaction; solder resist vinyl ester resin curability; halogen free catalyst epoxy acrylate prepn; phosphine catalyzed epoxy acrylate prepn resist
- IT Epoxy resins, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylates, hydroxy-containing, reaction products with acid anhydrides, cured with epoxies; manufacture of energy ray-curable epoxy resin acrylates without using halogen-containing catalysts for solder resist compns.)
- IT Epoxy resins, reactions  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(acrylates, hydroxy-containing, reaction products with acid anhydrides; manufacture of energy ray-curable epoxy resin acrylates without using halogen-containing catalysts for solder resist compns.)
- IT Phenolic resins, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(epoxy, novolak; manufacture of energy ray-curable epoxy resin acrylates without using halogen-containing catalysts for solder resist compns.)
- IT Solder resists  
(manufacture of energy ray-curable epoxy resin acrylates without using halogen-containing catalysts for solder resist compns.)
- IT Epoxy resins, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(phenolic, novolak; manufacture of energy ray-curable epoxy resin acrylates without using halogen-containing catalysts for solder resist compns.)
- IT Solder resists  
(**photoresists**; manufacture of energy ray-curable epoxy resin acrylates without using halogen-containing catalysts for solder resist compns.)
- IT **Photoresists**  
(solder; manufacture of energy ray-curable epoxy resin acrylates without using halogen-containing catalysts for solder resist compns.)
- IT 438210-71-0P 438210-72-1P 438210-73-2P 438210-74-3P  
438238-74-5P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(crosslinked; manufacture of energy ray-curable epoxy resin acrylates

STN search for 10665009

without using halogen-containing catalysts for solder resist compns.)  
IT 603-35-0, Triphenylphosphine, uses  
RL: CAT (Catalyst use); USES (Uses)  
(manufacture of energy ray-curable epoxy resin acrylates without using  
halogen-containing catalysts for solder resist compns.)  
IT 438210-64-1P 438210-66-3P 438210-67-4P 438210-69-6P  
438210-70-9P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(manufacture of energy ray-curable epoxy resin acrylates without using  
halogen-containing catalysts for solder resist compns.)  
IT 29570-58-9, Dipentaerythritol hexaacrylate 412044-75-8, EE 214  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(manufacture of energy ray-curable epoxy resin acrylates without using  
halogen-containing catalysts for solder resist compns.)

L8 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2002:332247 CAPLUS  
DN 136:356475  
ED Entered STN: 03 May 2002  
TI **Photoactivatable** waterborne coating compositions containing  
acrylic polyurethane polymers  
IN Van den Berg, Keimpe Jan; Noomen, Arie; Rous, Frederik; Rood, Ignace  
Damiaan Christiaan; Andringa, Heert; Kruithof, Klaas Jan Hendrik; Lindell  
Kjellqvist, Ann Kerstin Birgitta  
PA Akzo Nobel N.V., Neth.  
SO PCT Int. Appl., 41 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM C08G018-67  
ICS C08G018-28; C09D175-16  
CC 42-10 (Coatings, Inks, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002034808	A1	20020502	WO 2001-EP12421	20011025
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,				
	PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,				
	UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				
	DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,				
	BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002010574	A5	20020506	AU 2002-10574	20011025
	US 2002156145	A1	20021024	US 2001-45272	20011025
	EP 1328565	A1	20030723	EP 2001-978461	20011025
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	BR 2001014858	A	20040217	BR 2001-14858	20011025
	JP 2004512402	T2	20040422	JP 2002-537791	20011025
	ZA 2003003218	A	20040226	ZA 2003-3218	20030424
PRAI	EP 2000-203722	A	20001025		
	WO 2001-EP12421	W	20011025		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002034808	ICM	C08G018-67

ICS C08G018-28; C09D175-16  
 US 2002156145 ECLA C08G018/28D5F; C08G018/67B4; C09D175/16  
 JP 2004512402 FTERM 4D075/BB24Y; 4D075/BB42Z; 4D075/BB46Z; 4D075/CA02;  
 4D075/CA03; 4D075/CA13; 4D075/CA38; 4D075/CA44;  
 4D075/CB06; 4D075/DA06; 4D075/DB01; 4D075/DB36;  
 4D075/DB38; 4D075/DC02; 4D075/EA06; 4D075/EA13;  
 4D075/EA21; 4D075/EA43; 4D075/EB20; 4D075/EB22;  
 4D075/EB24; 4D075/EB33; 4D075/EB35; 4D075/EB38;  
 4D075/EB39; 4D075/EB52; 4D075/EB56; 4D075/EC07;  
 4D075/EC37; 4J034/BA08; 4J034/CA04; 4J034/CC03;  
 4J034/DA01; 4J034/DF02; 4J034/DF16; 4J034/DF20;  
 4J034/DF22; 4J034/DG02; 4J034/DG03; 4J034/DG04;  
 4J034/DL00; 4J034/DP12; 4J034/DR01; 4J034/FA02;  
 4J034/FB01; 4J034/FC01; 4J034/FD01; 4J034/HA01;  
 4J034/HA07; 4J034/HA08; 4J034/HA09; 4J034/HB06;  
 4J034/HB07; 4J034/HB08; 4J034/HB09; 4J034/HC03;  
 4J034/HC08; 4J034/HC12; 4J034/HC13; 4J034/HC17;  
 4J034/HC22; 4J034/HC35; 4J034/HC46; 4J034/HC52;  
 4J034/HC64; 4J034/HC67; 4J034/HC71; 4J034/HC73;  
 4J034/RA07; 4J038/DG111; 4J038/DG121; 4J038/DG131;  
 4J038/DG141; 4J038/DG201; 4J038/DG221; 4J038/DG271;  
 4J038/DG281; 4J038/DG291; 4J038/DJ012; 4J038/DK002;  
 4J038/GA01; 4J038/GA02; 4J038/KA03; 4J038/MA08;  
 4J038/MA10; 4J038/MA14; 4J038/PA17

AB The coating compns. comprise: (A) a (meth)acryloyl-functional polyurethane dispersion, with the (meth)acryloyl-functional polyurethane comprising 5-18% of alkylene oxide groups while the (meth)acryloyl-functionality is in the range of 2-40, and (B) UV-initiator. Preferably, the A comprises 8-18% of alkylene oxide groups. More preferably, the coating compns. comprise a reactive diluent. The A is obtainable by reaction of: (a)  $\geq 1$  organic polyisocyanate, (b) optionally,  $\geq 1$  organic compound containing  $\geq 2$  isocyanate-reactive groups and having a number-average mol. weight (Mn) in the range of 400 to 6000. (c)  $\geq 1$  isocyanate-reactive and/or isocyanate-functional compound bearing nonionic dispersing groups, (d)  $\geq 1$  isocyanate-reactive (meth)acryloyl-functional compound, (e) optionally,  $\geq 1$  active H-containing chain extender, and (f) optionally,  $\geq 1$  active H-containing compound bearing ionic groups. The waterborne coating compns. are especially suitable for clear coats. Thus, heating hexahydrophthalic anhydride 332 with polyethylene glycol monomethyl ether 1614 to 170° over 30 min, cooling to 140°, adding di(trimethylolpropane) 269, xylene 132 and a 85% aqueous H3PO4 solution 3.3 g, heating to 235° while removing water azeotropically to an acid number of 5 mg-KOH/g, cooling to 180°, and distilling xylene off gave an polyester diol solidified at room temperature and having an acid number of 3.9 mg-KOH/g and an OH number of 59 mg-KOH. Mixing the polyester 146.7 with an acrylated Eponex 1510 (hydrogenated bisphenol A glycidyl ether polymer) 273.2, trimethylolpropane 12.26, 4-hydroxybutyl acrylate 99.1, Desmodur W 260.8, di-tert-butyl-p-cresol 1.50 and 2-butanone 250 to 45°, stirring while bubbling with air, adding Sn(II) octanoate 0.94 g, heating at 80° for 6 h and working up gave a dispersion containing acrylated polyurethane with solids content 44%, Mn 2686, Mw 11,153 and particle diameter 120 nm. A coating composition was obtained by mixing the dispersion 50.0 with water 7.50, Bu glycol 2.50, BYK 346 (wetting agent) 0.25 and Darocur 1173 (photoinitiator) 1.28 parts.

ST photocurable waterborne coating acrylic polyurethane  
 polyethylene glycol copolymer  
 IT Polyesters, uses

STN search for 10665009

- RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyurethane-, polyoxyethylene-containing;  
**photoactivatable** waterborne coating compns. containing acrylic polyurethane polymers)
- IT Crosslinking  
(**photochem.**; **photoactivatable** waterborne coating compns. containing acrylic polyurethane polymers)
- IT Coating materials  
(water-thinned; **photoactivatable** waterborne coating compns. containing acrylic polyurethane polymers)
- IT 2082-81-7, Butanediol dimethacrylate  
RL: MOA (Modifier or additive use); USES (Uses)  
(SR 214, crosslinker; **photoactivatable** waterborne coating compns. containing acrylic polyurethane polymers)
- IT 3290-92-4, Sartomer 350 6606-59-3, Sartomer 239 211502-14-6, Craynor 132  
RL: MOA (Modifier or additive use); USES (Uses)  
(crosslinker; **photoactivatable** waterborne coating compns. containing acrylic polyurethane polymers)
- IT 822-06-0DP, reaction products with sulfonated Cardura E 10 maleate ester, polyethylene glycol Me ether, acrylic polyester, acrylate epoxy resin and polyisocyanate 79103-62-1DP, Desmodur W, reaction products with sulfonated Cardura E 10 maleate ester, polyethylene glycol Me ether, acrylic polyester and crosslinkers **80497-39-8DP**, reaction products with sulfonated Cardura E 10 maleate ester, polyethylene glycol Me ether, acrylic polyester, polyisocyanate and crosslinkers 420115-56-6DP, reaction products with sulfonated Cardura E 10 maleate ester, acrylated epoxy resin, polyisocyanate and crosslinkers **420123-98-4P**, Hydrogenated bisphenol A diglycidyl ether polymer acrylate, copolymer with di(trimethylolpropane)-hexahydrophthalic **anhydride** copolymer ester with PEG monomethyl ether, trimethylolpropane, 4-hydroxybutyl acrylate and Desmodur W **420124-00-1P**, Hydrogenated bisphenol A diglycidyl ether polymer acrylate, copolymer with di(trimethylolpropane)-hexahydrophthalic **anhydride** copolymer ester with PEG monomethyl ether, dimethylolpropionic acid, 4-hydroxybutyl acrylate and Desmodur W, salt with N,N-dimethylethanolamine 420124-01-2DP, Cardura E 10 maleate ester, sulfonated, reaction products with polyethylene glycol Me ether, acrylated hydrogenated bisphenol A diglycidyl ether polymer, polyisocyanate and crosslinkers **420124-04-5P 420124-06-7P**, Hydrogenated bisphenol A diglycidyl ether polymer acrylate, copolymer with di(trimethylolpropane)-hexahydrophthalic **anhydride** copolymer ester with PEG monomethyl ether, dimethylolpropionic acid, 1,6-hexanediol, 4-hydroxybutyl acrylate and Desmodur W  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**photoactivatable** waterborne coating compns. containing acrylic polyurethane polymers)
- IT 207621-14-5, Primal E 3120 420784-23-2, LUX 101VP  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(**photoactivatable** waterborne coating compns. containing acrylic polyurethane polymers)
- IT 7473-98-5, Darocur 1173 84434-11-7, Lucirin TPO-L 149260-52-6, Esacure KIP 100F 224632-52-4, Speedcure BEM  
RL: CAT (Catalyst use); USES (Uses)  
(**photoinitiator**; **photoactivatable** waterborne

STN search for 10665009

coating compns. containing acrylic polyurethane polymers)  
IT 80497-39-8P, Hydrogenated bisphenol A diglycidyl ether polymer  
acrylate 420115-56-6P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)

(prepolymer; **photoactivatable** waterborne coating compns.  
containing acrylic polyurethane polymers)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Anon; JOURNAL OF APPLIED POLYMER SCIENCE 1996, V62, P1775
- (2) Basf; EP 0424705 A 1991 CAPLUS
- (3) Bayer; EP 0453838 A 1991 CAPLUS
- (4) Dsm; WO 9429398 A 1994 CAPLUS
- (5) Hoechst; EP 0613915 A 1994 CAPLUS

L8 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:356817 CAPLUS

DN 133:11028

ED Entered STN: 30 May 2000

TI Regioselective surface modification of polymer and manufacture of printing  
plate using it

IN Muratake, Hiroaki; Shigemitsu, Yasuo; Ito, Daisuke; Hattori, Iwao;  
Yonehara, Yoshitomo

PA Dainippon Ink and Chemicals, Inc., Japan; Kawamura Institute of Chemical  
Research

SO Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08J007-12

ICS B41C001-10; B41N001-08; C08J007-16

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000143852	A2	20000526	JP 1998-318224	19981110
PRAI	JP 1998-318224		19981110		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000143852	ICM	C08J007-12
	ICS	B41C001-10; B41N001-08; C08J007-16

AB The method is applied to a surface-modification substrate, comprising a  
support (C) coated with  $\geq 1$  modification medium (A) having reactive  
functional groups and optionally a laser-absorbant layer, by the following  
3 steps: (1) regioselective laser beam radiation to A (and the  
laser-absorbent layer) to remove the irradiated area of A (and the  
irradiated laser-absorbent layer) from C, (2) lamination of a polymeric  
substrate (B) having reactive functional groups on the remaining region of  
A, followed by removing C (and the laser-absorbent layer) to transfer the  
remaining patterned A to B, and (3) coupling the reactive groups of A with  
B. Printing plates, near IR laser-irradiated to form hydrophilic image  
receptor by the above method, are also claimed. The dry-process method  
gives stain-free printing plates with improved printability.

ST regioselective modification polymer lithog printing plate; laser beam  
radiation polymer regioselective modification; dry process lithog plate  
manuf

IT Laser ablation  
Lithographic plates



STN search for 10665009

**Photoimaging materials**

(regioselective surface modification of polymer for manufacture of lithog. printing plate)

IT 270249-15-5P, Celloxide 2021-Epolead GT 301-1,6-hexanediol diglycidyl ether-hydrogenated bisphenol A diglycidyl ether copolymer  
270563-91-2P, 1,6-Hexanediol diglycidyl ether-hydrogenated bisphenol A diglycidyl ether-methacrylic acid-styrene copolymer  
270564-22-2P, Dipentaerythritol hexaacrylate-2-hydroxyethyl methacrylate-maleic anhydride-styrene-Unidic S 5-193 copolymer  
270564-44-8P, 1,1,2,2-Tetrahydroperfluorodecyl acrylate-IBXA-Kayarad R 551-Unidic S 5-193 copolymer 270564-45-9P, 2,3-Dibromopropyl acrylate-dipentaerythritol hexaacrylate-styrene-4-vinylpyridine-Unidic S 5-193 copolymer 270564-46-0P, Dipentaerythritol hexaacrylate-1,1,2,2-tetrahydroperfluorodecyl acrylate-IBXA-Unidic S 5-193 copolymer  
270564-47-1P, Dipentaerythritol hexaacrylate-HDDA-2-phenoxyethyl acrylate-sodium 2-sulfoethyl methacrylate-Unidic S 5-193-Unidic V 4263 copolymer 270564-48-2P, Hydrogenated bisphenol A diglycidyl ether-HDDA-2-hydroxyethyl methacrylate-sodium 2-sulfoethyl methacrylate-Unidic V 4263 copolymer  
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
(regioselective surface modification of polymer for manufacture of lithog. printing plate)

L8 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:356386 CAPLUS

DN 133:5979

ED Entered STN: 30 May 2000

TI Radiation-curable inks containing maleimide derivatives and curing method

IN Komehara, Yoshitomo; Takayanagi, Yasuo; Kasai, Masanori; Takahashi, Makoto

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 48 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D011-10

ICS C08G018-83; C08G064-42; C09D167-07; C09D171-00; C08F290-06;  
C08F299-02

CC 42-12 (Coatings, Inks, and Related Products)

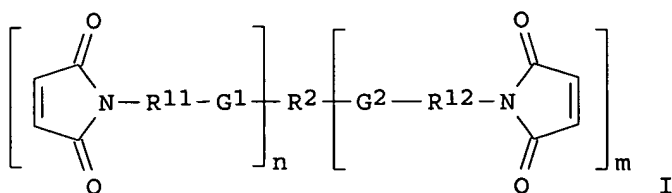
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000144033	A2	20000526	JP 1998-322736	19981113
PRAI	JP 1998-322736		19981113		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000144033	ICM	C09D011-10
	ICS	C08G018-83; C08G064-42; C09D167-07; C09D171-00; C08F290-06; C08F299-02

GI



- AB The compns., which are curable in the absence of **photoinitiators** with low odor, contain I [R11, R12 = aliphatic and/or aromatic hydrocarbon group; G1, G2 = ether, ester, urethane or carbonate linkage; R2 = aliphatic and/or aromatic residue having average mol. weight 40-100,000 and containing
- ≥1 ether, ester, urethane or carbonate group; m, n = 0-6, and m + n = 1-6]. The compns. are also suitable for clear coatings. Thus, an ink composition containing II 77, talc 3, wax 2, and yellow pigments 18% had good curability, and was cured by UV to give printed images showing good pencil hardness H, and solvent resistance.
- ST polyoxytetramethylene maleimide printing ink UV curing; UV curable printing ink; clear coating maleimide resin
- IT Polyoxyalkylenes, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (UV-curable resin compns. containing maleimide derivs. for inks and coatings)
- IT Coating materials  
 (UV-curable; UV-curable resin compns. containing maleimide derivs. for coatings)
- IT Epoxy resins, uses  
 Polyoxyalkylenes, uses  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (maleimido group-containing, polymers; UV-curable resin compns. containing maleimide derivs. for inks and coatings)
- IT Cans  
 (metal; UV-curable resin compns. containing maleimide derivs. for inks and coatings)
- IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene-, maleimido group-containing, polymers; UV-curable resin compns. containing maleimide derivs. for inks and coatings)
- IT Inks  
 (printing, UV-curable, screen; UV-curable resin compns. containing maleimide derivs. for inks)
- IT Coating materials  
 (transparent, UV-curable; UV-curable resin compns. containing maleimide derivs. for coatings)
- IT 9050-83-3DP, Polytetramethylene glycol-2,4-TDI copolymer, maleimide derivs., polymers  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (UV-curable resin compns. containing maleimide derivs. for inks and coatings)
- IT 25085-99-8DP, Epiclon 840S, maleimide derivs., polymers  
 26283-70-5DP, HBE 100, maleimide derivs., polymers 39378-01-3DP, Isophorone diisocyanate-polytetramethylene glycol copolymer, maleimide derivs., polymers 216249-62-6P 216249-82-0P 216249-91-1P 216249-97-7P 244761-69-1P 270907-16-9P 271582-43-5P 271582-44-6P

STN search for 10665009

271582-45-7P 271582-46-8P 271582-47-9P 271582-48-0P 271582-49-1P  
271582-50-4P 271582-51-5P 271582-52-6P 271582-53-7P 271582-54-8P  
271582-55-9P 271582-56-0P 271582-57-1P 271582-58-2P 271582-59-3P  
271582-60-6P 271582-61-7P 271582-62-8P 271582-63-9P 271582-64-0P  
271582-65-1P 271582-66-2P 271582-67-3P 271582-68-4P 271582-69-5P  
271582-70-8P 271582-71-9P 271582-72-0P 271582-73-1P 271582-74-2P  
271588-28-4P 271588-29-5P 271588-31-9P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(UV-curable resin compns. containing maleimide derivs. for inks and coatings)

IT 1585-90-6P 5063-96-7P, N-Hydroxymethylmaleimide 25021-08-3P,  
Maleimidoacetic acid 55750-53-3P 57079-01-3P 62212-14-0P  
216249-31-9P 216249-34-2P 216249-38-6P 216249-41-1P 216249-51-3P  
216249-53-5P 216249-61-5P 216311-88-5P 269747-30-0P 270907-12-5P  
271582-37-7P 271582-38-8P 271582-39-9P 271582-40-2P 271582-41-3P  
271582-42-4P 271588-25-1P 271588-26-2P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(UV-curable resin compns. containing maleimide derivs. for inks and coatings)

IT 60-32-2 108-31-6, Maleic anhydride, reactions 112-27-6  
25190-06-1 25322-68-3 25791-96-2, Sannix GP 1000 42503-45-7  
58991-77-8, Kurapol P 1010 62580-01-2, Rikaresin HEO 20

RL: RCT (Reactant); RACT (Reactant or reagent)

(UV-curable resin compns. containing maleimide derivs. for inks and coatings)

L8 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:521716 CAPLUS

DN 121:121716

ED Entered STN: 03 Sep 1994

TI **photoimaging** system with aqueous development.

IN Klun, Thomas P.; Lundquist, Wallace R.

PA Minnesota Mining and Manufacturing Co., USA

SO Fr. Demande, 86 pp.

CODEN: FRXXBL

DT Patent

LA French

IC ICM G03C001-76

ICS C08G063-52; C08G063-91

ICA B41N001-00

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2692376	A1	19931217	FR 1993-7063	19930611
	FR 2692376	B1	19950602		
PRAI	US 1992-899339		19920616		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
FR 2692376	ICM	G03C001-76
	ICS	C08G063-52; C08G063-91
	ICA	B41N001-00

AB An image forming system contains a pigment dispersion in the **photosensitive** composition containing an oligomer which contains per mol.: an ethylenically unsatd. free radical,  $\geq 1$  acid group, and  $\geq 1$

amine group. The **photosensitive** layer can be developed in aqueous solution and is dispersible in aqueous alkaline solution, but upon **photoactivation** this dispersibility is reduced.

ST **photoimaging** system aq development oligomer

IT **Photoimaging** compositions and processes

(aqueous developable oligomer for)

IT 77-86-1D, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 79-41-4D, Methacrylic acid, reaction product with glycidyl methacrylate, succinic **anhydride**, epoxy compound, and amine 106-91-2D, Glycidyl methacrylate, reaction product with methacrylic acid, succinic **anhydride**, epoxy compound, and amine 108-00-9D, N,N-Dimethylethylenediamine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 108-18-9D, Diisopropylamine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 108-30-5D, Succinic **anhydride**, reaction product with pentaerythritol acrylate, epoxy compound, and amine 109-83-1D, N-Methylethanolamine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 110-85-0D, Piperazine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 110-91-8D, Morpholine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 111-42-2D, Diethanolamine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 111-92-2D, Dibutylamine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 121-44-8D, Triethylamine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound 124-09-4D, 1,6-Diaminohexane, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 140-31-8D, N-(Aminoethyl)piperazine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 141-43-5D, Ethanolamine, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 288-32-4D, Imidazole, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 9002-98-6D, Corcat p-18, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 9046-10-0D, Jeffamine d-400, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 25068-38-6D, Epon 1001, reaction product with glycidyl methacrylate, methacrylic acid, succinic **anhydride**, and amine 25068-38-6D, Epon 836, reaction product with pentaerythritol acrylate, succinic **anhydride**, and amine 25085-99-8D, Der332, reaction product with glycidyl methacrylate, methacrylic acid, succinic **anhydride**, and amine 26283-70-5D, reaction product with pentaerythritol acrylate, succinic **anhydride**, and amine 27103-66-8D, Cy-184, reaction product with glycidyl methacrylate, methacrylic acid, succinic **anhydride**, and amine 28906-98-1D, Xb-2793, reaction product with pentaerythritol acrylate, succinic **anhydride**, and amine 30674-80-7D, Isocyanatoethyl methacrylate, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 34590-59-5D, Tactix 742, reaction product with pentaerythritol acrylate, succinic **anhydride**, and amine 37348-52-0D, DEN431, reaction product with pentaerythritol acrylate, succinic **anhydride**, and amine 62395-22-6D, Kemamine DP 3680, reaction product with pentaerythritol acrylate, succinic **anhydride**, epoxy compound, and amine 156251-96-6D, reaction product with pentaerythritol acrylate, succinic **anhydride**, and amine 156259-83-5D, reaction product with succinic **anhydride**, epoxy compound, and amine

RL: USES (Uses)

STN search for 10665009

(photoimaging composition containing)

L8 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1990:553934 CAPLUS  
DN 113:153934  
ED Entered STN: 27 Oct 1990  
TI Cured glycidyl isocyanurate resins transparent to UV  
IN Sagami, Yosuke; Inagaki, Akihiro; Kajiware, Yozo; Yoshigahara, Haruyuki  
PA Hysol Japan, Ltd., Japan  
SO Eur. Pat. Appl., 8 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC ICM C09K003-10  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 355728	A2	19900228	EP 1989-115239	19890818
	EP 355728	A3	19901219		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 02187421	A2	19900723	JP 1989-210175	19890816
PRAI	JP 1988-205786		19880819		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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EP 355728	ICM	C09K003-10
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AB The title resins have good strength, toughness, and moisture resistance, and are useful for sealing UV-sensitive electronic devices or as transparent substrates, coatings, inks, adhesives, or lenses (no data). Thus, a UV-sensitive 64K erasable programmable read-only memory (EPROM) was dip-coated with a composition of triglycidyl isocyanurate, hexahydrophthalic anhydride, and BuOH, dried, baked at 150°, and postcured at 50° to give a device which showed no loss of data or UV erasability after 1000 h at 85° and 85% humidity or 800 thermal cycles between -40° and +80°.

ST UV transparency epoxy resin; glycidyl isocyanurate resin; sealant  
**photosensitive** EPROM

IT Lenses  
(UV-transparent, glycidyl isocyanurate resins for)

IT Adhesives  
Coating materials  
Inks  
(UV-transmitting, glycidyl isocyanurate resins as)

IT Potting compositions  
(UV-transmitting, glycidyl isocyanurate resins, for  
**photosensitive** devices)

IT Polyisocyanurates  
RL: PREP (Preparation)  
(epoxy, UV-transparent, manufacture of)

IT Epoxy resins, uses and miscellaneous  
RL: PREP (Preparation)  
(polyisocyanurate-, UV-transparent, manufacture of)

IT Memory devices  
(programmable read-only, erasable, UV-sensitive, UV-transparent potting compns. for)

IT 28825-96-9P, Triglycidyl isocyanurate homopolymer 57602-00-3P  
129825-75-8P 129825-76-9P 129825-77-0P  
RL: PREP (Preparation)

STN search for 10665009

(UV-transparent, manufacture of)

L8 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1979:542198 CAPLUS  
DN 91:142198  
ED Entered STN: 12 May 1984  
TI Acrylic urethane polymer coatings  
IN Sato, Mitsuo; Kobayashi, Juichi  
PA Mitsubishi Rayon Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC B32B027-06  
CC 42-10 (Coatings, Inks, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54058784	A2	19790511	JP 1977-124693	19771018
	JP 60035256	B4	19850813		
PRAI	JP 1977-124693		19771018		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 54058784	IC	B32B027-06

AB Metal substrates or metal-coated plastic substrates are coated with resin layers having glass-transition temperature <20° and top coated with resin layers having glass-transition temperature >40°. Thus, a Cr plated ABS resin [9003-56-9] plate was coated with a composition of adipic acid-diethylene glycol-hexamethylene diisocyanate-2-hydroxypropyl acrylate copolymer [71456-50-3] 20, adipic acid-Esterdiol 204-2-hydroxyethyl acrylate-xyllylene diisocyanate copolymer [71460-84-9] 20, 2-ethoxyethyl acrylate 40, poly(Et acrylate) 20, and diethoxyacetophenone (I) 0.5 part to 2 mm, UV irradiated in air, top coated with a composition of 2,2-bis(4-hydroxycyclohexyl)propane polypropylene glycol diether-hexamethylene diisocyanate-2-hydroxypropyl acrylate-isophorone diisocyanate copolymer [71489-42-4] 60, acrylic acid-neopentyl glycol-phthalic anhydride copolymer [71460-83-8] 10, tetrahydrofurfuryl acrylate 30, and I 1 part to 3 mm, and UV irradiated to form a coating having pencil hardness H and good resistance to heat shock (-30 and +80°), impact (500 g dart >50 cm), and weathering.

ST metal plate resin coating; acrylic urethane polymer coating; **photocurable** coating

IT Urethane polymers, uses and miscellaneous  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylic, coatings, **photocurable**, on metal or metal-coated substrates)

IT Crosslinking  
(**photochem.**, of acrylic urethane polymer coatings, for metal or metal-coated substrates)

IT Coating materials  
(**photocurable**, acrylic urethane polymers, for metal or metal-coated substrates)

IT 9003-56-9  
RL: USES (Uses)  
(chromium-coated, top coating of, with **photocurable** acrylic urethane polymers)

IT 7429-90-5, uses and miscellaneous  
RL: USES (Uses)  
(coatings for, **photocurable** acrylic urethane polymers as)

STN search for 10665009

IT 7440-47-3, uses and miscellaneous  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, on ABS resin, **photocurable** acrylic urethane top  
coating for)  
IT 41349-20-6 60650-72-8 **71456-49-0** 71456-50-3 71460-83-8  
71460-84-9 71489-42-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, **photocurable**, for metal or metal-coated  
substrates)

=> log y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	52.70	90.02
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-11.90	-11.90

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NEWS 14	SEP 27	SWETSCAN will no longer be available on STN

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NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
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FULL ESTIMATED COST	0.21	0.21

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FILE COVERS 1907 - 18 Oct 2004 VOL 141 ISS 17

FILE LAST UPDATED: 17 Oct 2004 (20041017/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> e wo200277058/pn

E1	1	WO2002077056/PN
E2	1	WO2002077057/PN
E3	1 -->	WO2002077058/PN
E4	1	WO2002077059/PN
E5	1	WO2002077060/PN
E6	1	WO2002077061/PN
E7	1	WO2002077062/PN
E8	1	WO2002077063/PN
E9	1	WO2002077064/PN



STN search for 10665009

E10 2 WO2002077065/PN  
E11 1 WO2002077066/PN  
E12 1 WO2002077067/PN

=> s e3;d all

L1 1 WO2002077058/PN  
(WO2002077058/PN)

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2002:754449 CAPLUS  
DN 137:279978  
ED Entered STN: 04 Oct 2002  
TI Actinic energy ray-curable epoxy acrylate resin composition with balance  
of flexibility and stiffness  
IN Minegishi, Shoji; Ogawa, Yuhta  
PA Taiyo Ink Manufacturing Co., Ltd., Japan  
SO PCT Int. Appl., 44 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
IC ICM C08G059-14  
ICS C08L063-00; C08F299-02; G03F007-027  
CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002077058	A1	20021003	WO 2002-JP2790	20020322 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	US 2004067440	A1	20040408	US 2003-665009	20030922
PRAI	JP 2001-85921	A	20010323		
	WO 2002-JP2790	A1	20020322		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2002077058	ICM	C08G059-14
	ICS	C08L063-00; C08F299-02; G03F007-027

AB Title photocurable/thermosetting epoxy acrylate compound, useful in applications such as a solder resist for printed wiring boards and an interlayer dielec. for multilayered printed wiring boards, is reaction products of (I) unsatd. monocarboxylic acid (e.g., acrylic acid) and (II) a linear epoxy resin derived from polyaddn. reaction products of (i) 0.1-100% hydrogenated bisphenol A-based bifunctional epoxy compds. (e.g., hydrogenated bisphenol A glycidyl ether) and (ii) dicarboxylic acid (e.g., cyclohexene dicarboxylic acid), and optionally reaction products with epihalohydrin at hydroxyl group (e.g., epichlorohydrin). Thus, a photocurable composition was prepared by mixing an epoxy acrylate (cyclohexene dicarboxylic acid-Epikote YL 6663 copolymer, reaction products with epichlorohydrin, esters with acrylic acid) 100.0, Epiclon N 695 30.0, Irgacure 369 3.5, barium sulfate 50.0, melamine 2.0 parts, copper phthalocyanine 1.0, dipentaerythritolhexacrylate 18.0, and carbitol

STN search for 10665009

acetate 5.0 parts. The cured products exhibit excellent low dielec. constant, water resistance, heat resistance, chemical resistance, elec. insulation, and moldability.

ST actinic energy ray curable epoxy acrylate resin compn

IT Epoxy resins, preparation

RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)  
(acrylic; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Epoxy resins, properties

RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(bisphenol A diglycidyl ether-based, hydrogenated; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Printed circuit boards

(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Crosslinking

(photochem.; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Polymerization catalysts

(photopolymn.; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Solder resists

(photoresists; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Photoresists

(solder; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 79-10-7DP, Acrylic acid, reaction products with epichlorohydrin and hydrogenated bisphenol A glycidyl ether-cyclohexene dicarboxylic acid copolymer 106-89-8DP, Epichlorohydrin, reaction products with acrylic acid and hydrogenated bisphenol A glycidyl ether-cyclohexene dicarboxylic acid copolymer 464917-16-6DP, reaction products with epichlorohydrin and acrylic acid

RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)  
(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 9003-17-2D, Polybutadiene, epoxylated

RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)  
(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 91594-04-6, Epiclon N 695

RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 112-15-2, Carbitol acetate

RL: NUU (Other use, unclassified); USES (Uses)  
(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 119313-12-1, Irgacure 369

RL: CAT (Catalyst use); USES (Uses)

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(photopolymn. catalyst; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Dainippon Ink And Chemicals Inc; JP 987346 A 1997
- (2) Nippon Kayaku Co Ltd; JP 200151415 A 2001
- (3) Taiyo Ink Manufacturing Co Ltd; JP 200124336 A 1998
- (4) Taiyo Ink Manufacturing Co Ltd; US 5837155 A 1998
- (5) Taiyo Ink Manufacturing Co Ltd; US 5948514 A 1999 CAPLUS
- (6) Taiyo Ink Manufacturing Co Ltd; JP 954434 A 1999

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RN 79-10-7 REGISTRY

CN 2-Propenoic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Acrylic acid (6CI, 7CI, 8CI)

OTHER NAMES:

CN Acroleic acid

CN Ethylenecarboxylic acid

CN NSC 4765

CN Propenoic acid

CN Vinylformic acid

FS 3D CONCORD

DR 55927-87-2

MF C3 H4 O2

CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*, DIOGENES, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT, PS, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB  
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Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

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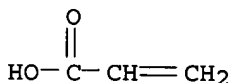
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RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

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RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



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33514 REFERENCES IN FILE CA (1907 TO DATE)

18295 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

33552 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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FULL ESTIMATED COST

2.19

7.52

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Patent Office Classifications  
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<http://www.cas.org/ONLINE/DBSS/registryss.html>

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(464917-16-6/RN)

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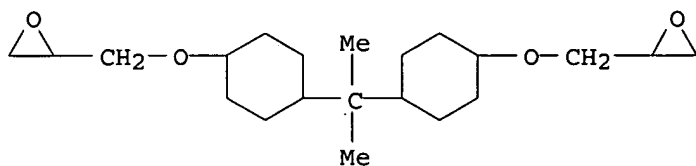
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CN 4-Cyclohexene-1,2-dicarboxylic acid, polymer with 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediyloxymethylene)]bis[oxirane] (9CI)  
(CA INDEX NAME)

STN search for 10665009

MF (C21 H36 O4 . C8 H10 O4)x  
CI PMS, COM  
PCT Epoxy resin, Polyether, Polyether  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL  
DT.CA Caplus document type: Patent  
RLD.P Roles for non-specific derivatives from patents: PREP (Preparation);  
PRP (Properties); USES (Uses)

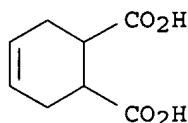
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CRN 13410-58-7  
CMF C21 H36 O4



CM 2

CRN 88-98-2  
CMF C8 H10 O4



2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

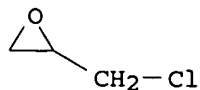
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L2 1 106-89-8  
(106-89-8/RN)

=> d

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 106-89-8 REGISTRY  
CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Propane, 1-chloro-2,3-epoxy- (6CI, 8CI)  
OTHER NAMES:  
CN (+)-Epichlorohydrin  
CN (Chloromethyl)ethylene oxide  
CN (Chloromethyl)oxirane  
CN (RS)-Epichlorohydrin  
CN  $\alpha$ -Epichlorohydrin  
CN  $\gamma$ -Chloropropylene oxide

STN search for 10665009

CN 1,2-Epoxy-3-chloropropane  
CN 1-Chloro-2,3-epoxypropane  
CN 2,3-Epoxypropyl chloride  
CN 2-(Chloromethyl)oxirane  
CN 3-Chloro-1,2-epoxypropane  
CN 3-Chloro-1,2-propylene oxide  
CN 3-Chloropropene-1,2-oxide  
CN 3-Chloropropylene oxide  
CN Chloropropylene oxide  
CN dl- $\alpha$ -Epichlorohydrin  
CN Epichlorohydrin  
CN Glycerol epichlorohydrin  
CN Glycidyl chloride  
CN J 006  
CN NSC 6747  
FS 3D CONCORD  
DR 13403-37-7, 9009-12-5, 109351-74-8, 36250-81-4  
MF C3 H5 Cl O  
CI COM  
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM\*, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT, PS, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB  
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Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
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DT.CA Caplus document type: Conference; Dissertation; Journal; Patent; Report  
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)  
RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)  
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)  
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*



STN search for 10665009

15148 REFERENCES IN FILE CA (1907 TO DATE)  
3587 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
15164 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
27 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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L3 1 79-10-7  
(79-10-7/RN)

=> d

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN

RN 79-10-7 REGISTRY

CN 2-Propenoic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Acrylic acid (6CI, 7CI, 8CI)

OTHER NAMES:

CN Acroleic acid

CN Ethylenecarboxylic acid

CN NSC 4765

CN Propenoic acid

CN Vinylformic acid

FS 3D CONCORD

DR 55927-87-2

MF C3 H4 O2

CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*, DIOGENES, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT, PS, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB  
(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA Caplus document type: Book; Conference; Dissertation; Journal; Patent; Preprint; Report

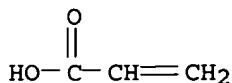
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

STN search for 10665009



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

33514 REFERENCES IN FILE CA (1907 TO DATE)  
18295 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
33552 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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(FILE 'HOME' ENTERED AT 14:33:00 ON 18 OCT 2004)

FILE 'REGISTRY' ENTERED AT 14:33:09 ON 18 OCT 2004

L1 1 S 464917-16-6  
L2 1 S 106-89-8  
L3 1 S 79-10-7

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L4 0 L1 AND L2 AND L3

=> file caplus

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SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

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FILE LAST UPDATED: 17 Oct 2004 (20041017/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l1

L5 2 L1

=> d all 1-2

L5 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

STN search for 10665009

AN 2002:754449 CAPLUS  
DN 137:279978  
ED Entered STN: 04 Oct 2002  
TI Actinic energy ray-curable epoxy acrylate resin composition with balance of flexibility and stiffness  
IN Minegishi, Shoji; Ogawa, Yuhta  
PA Taiyo Ink Manufacturing Co., Ltd., Japan  
SO PCT Int. Appl., 44 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
IC ICM C08G059-14  
ICS C08L063-00; C08F299-02; G03F007-027  
CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002077058	A1	20021003	WO 2002-JP2790	20020322
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	US 2004067440	A1	20040408	US 2003-665009	20030922
PRAI	JP 2001-85921	A	20010323		
	WO 2002-JP2790	A1	20020322		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2002077058	ICM	C08G059-14
	ICS	C08L063-00; C08F299-02; G03F007-027

AB Title photocurable/thermosetting epoxy acrylate compound, useful in applications such as a solder resist for printed wiring boards and an interlayer dielec. for multilayered printed wiring boards, is reaction products of (I) unsatd. monocarboxylic acid (e.g., acrylic acid) and (II) a linear epoxy resin derived from polyaddn. reaction products of (i) 0.1-100% hydrogenated bisphenol A-based bifunctional epoxy compds. (e.g., hydrogenated bisphenol A glycidyl ether) and (ii) dicarboxylic acid (e.g., cyclohexene dicarboxylic acid), and optionally reaction products with epihalohydrin at hydroxyl group (e.g., epichlorohydrin). Thus, a photocurable composition was prepared by mixing an epoxy acrylate (cyclohexene dicarboxylic acid-Epikote YL 6663 copolymer, reaction products with epichlorohydrin, esters with acrylic acid) 100.0, Epiclon N 695 30.0, Irgacure 369 3.5, barium sulfate 50.0, melamine 2.0 parts, copper phthalocyanine 1.0, dipentaerythritolhexaacrylate 18.0, and carbitol acetate 5.0 parts. The cured products exhibit excellent low dielec. constant, water resistance, heat resistance, chemical resistance, elec. insulation, and moldability.

ST actinic energy ray curable epoxy acrylate resin compn

IT Epoxy resins, preparation

RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)  
(acrylic; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Epoxy resins, properties

STN search for 10665009

RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(bisphenol A diglycidyl ether-based, hydrogenated; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Printed circuit boards  
(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Crosslinking  
(photochem.; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Polymerization catalysts  
(photopolymn.; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Solder resists  
(photoresists; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT Photoresists  
(solder; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 79-10-7DP, Acrylic acid, reaction products with epichlorohydrin and hydrogenated bisphenol A glycidyl ether-cyclohexene dicarboxylic acid copolymer 106-89-8DP, Epichlorohydrin, reaction products with acrylic acid and hydrogenated bisphenol A glycidyl ether-cyclohexene dicarboxylic acid copolymer 464917-16-6DP, reaction products with epichlorohydrin and acrylic acid  
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)  
(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 9003-17-2D, Polybutadiene, epoxylated  
RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)  
(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 91594-04-6, Epiclon N 695  
RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 112-15-2, Carbitol acetate  
RL: NUU (Other use, unclassified); USES (Uses)  
(manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

IT 119313-12-1, Irgacure 369  
RL: CAT (Catalyst use); USES (Uses)  
(photopolymn. catalyst; manufacture of actinic energy ray-curable photocurable/thermosetting epoxy acrylate resin composition for printed circuit boards)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
(1) Dainippon Ink And Chemicals Inc; JP 987346 A 1997  
(2) Nippon Kayaku Co Ltd; JP 200151415 A 2001  
(3) Taiyo Ink Manufacturing Co Ltd; JP 200124336 A 1998  
(4) Taiyo Ink Manufacturing Co Ltd; US 5837155 A 1998  
(5) Taiyo Ink Manufacturing Co Ltd; US 5948514 A 1999 CAPLUS  
(6) Taiyo Ink Manufacturing Co Ltd; JP 954434 A 1999

STN search for 10665009

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2002:747786 CAPLUS  
DN 137:279957  
ED Entered STN: 03 Oct 2002  
TI Photocurable epoxy acrylate resin composition with balance of flexibility and stiffness  
IN Minegishi, Masashi  
PA Taiyo Ink Mfg Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08G059-17  
ICS C08F299-02  
CC 37-6 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002284842	A2	20021003	JP 2001-85869	20010323
PRAI	JP 2001-85869		20010323		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002284842	ICM	C08G059-17
	ICS	C08F299-02

AB Title epoxy acrylate compound is reaction products of (I) unsatd. monocarboxylic acid (e.g., acrylic acid) and (II) a linear epoxy resin derived from polyaddn. reaction products of (i) 0.1-100% hydrogenated bisphenol A-based bifunctional epoxy compds. (e.g., hydrogenated bisphenol A glycidyl ether) and (ii) a compound containing at least two carboxyl groups

in 1 mol (e.g., cyclohexene dicarboxylic acid), and optionally reaction products with epihalohydrin at hydroxyl group (e.g., epichlorohydrin). Thus, a photocurable composition was prepared by mixing SP 3500 100, an epoxy acrylate (cyclohexene dicarboxylic acid-YL 6663 copolymer, reaction products with epichlorohydrin, esters with acrylic acid) 20, Epiclon N 695 30.0, Irgacure 369 3.5, barium sulfate 50.0, melamine 2.0 parts, copper phthalocyanine 1.0, and carbitol acetate 5.0 parts. The cured products exhibit excellent low dielec. constant, water resistance, heat resistance, chemical resistance, elec. insulation, and moldability.

ST photocurable epoxy acrylate resin compn

IT Epoxy resins, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic; manufacture of photocurable epoxy acrylate resin composition)

IT Crosslinking

(photochem.; manufacture of photocurable epoxy acrylate resin composition)

IT 79-10-7DP, Acrylic acid, reaction products with epichlorohydrin and bisphenol A glycidyl ether-1,4-cyclohexene dicarboxylic acid copolymer 106-89-8DP, Epichlorohydrin, reaction products with acrylic acid and bisphenol A glycidyl ether-1,4-cyclohexene dicarboxylic acid copolymer 464917-16-6DP, reaction products with epichlorohydrin and acrylic acid 464917-17-7P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of photocurable epoxy acrylate resin composition)

IT 464917-15-5, SP 3500

STN search for 10665009

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(manufacture of photocurable epoxy acrylate resin composition)

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FILE 'REGISTRY' ENTERED AT 14:33:09 ON 18 OCT 2004

L1 1 S 464917-16-6  
L2 1 S 106-89-8  
L3 1 S 79-10-7  
L4 0 S L1 AND L2 AND L3

FILE 'CAPLUS' ENTERED AT 14:34:55 ON 18 OCT 2004

L5 2 S L1

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.40	-1.40

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status data from INPADOC  
NEWS 9 SEP 01 INPADOC: New family current-awareness alert (SDI) available